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CITY OF LA QUINTA COMPREHENSIVE GENERAL PLAN DRAFT ENVIRONMENTAL IMPACT REPORT

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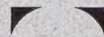
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September 6, 2001
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ENVIRONMENTAL SUMMARY MATRIX

This Environmental Impact Report (EIR) has been prepared to assess the potential impacts to the environment which may result from the approval and implementation of the proposed La Quinta Comprehensive General Plan, and of buildout of proposed Annexation No. 12 and a concurrent sphere of influence (SOI) amendment. The planning area includes a total of approximately 53,498 acres consisting of a mix of residential densities ranging from apartments, to gated subdivisions, to large acreage estates. The City is also host to a variety of commercial uses, ranging from specialty retail to community-scale shopping centers and luxury resort developments. Recreational uses have been incorporated throughout the community and include both public and private golf courses, parks and undeveloped open spaces.

The proposed land use scenario provides for a range of residential densities in the planning area, ranging from one unit per acre to sixteen units per acre. Compared to the existing City General Plan, a modest reduction in residential acreage is proposed, as well as a moderate increase in commercial and industrial lands. The proposed land use plan has been developed as a means of broadening land use and economic development opportunities in the City. The land use designations assigned to the annexation and sphere of influence amendment are included in the General Plan planning area, and continue the low intensity development pattern already established in the City.

The City of La Quinta is located in the central-easterly portion of the Coachella Valley, in Riverside County. The incorporated City limits can be described as including: portions of Section 25 and all of Section 36, Township 5 South, Range 6 East; Sections 1, 12, 13, 24, and 25, Township 6 South, Range 6 East; portions of Sections 18, 19, 20, 28, 29, and 30, and all of Sections 31 and 32, Township 5 South, Range 7 East; portions of Sections 10, 22, and 28, and all of Sections 4, 5, 6, 7, 8, 9, 15, 16, 17, 18, 19, 20, 21, 29, 30 and 33, Township 6 South, Range 7 East; and all of Sections 4 and 5, Township 7 South, Range 7 East, San Bernardino Baseline and Meridian

Sphere-of-influence lands include the following: portions of Section 18, Township 5 South, Range 7 East; and portions of Sections 10, 22, 27 and 28, Township 6 South, Range 7 East of the San Bernardino Baseline and Meridian.

Planning area lands (including annexation No. 12 and the SOI amendment area) include: portions of Sections 6, 7, 8, 9, 16, 17, 18, Township 5 South, Range 7 East; portions of Sections 1, 13, and all of Sections 11, 12, 14, 23, 24, 25, 26, 34, 35, 36, Township 6 South, Range 7 East; portions of Sections 22, 23, 26, 35, 36, and all of Sections 19, 20, 21, 27, 28, 29, 30, 31, 32, 33, 34, Township 6 South, Range 8 East; all of Sections 1, 2, 3, 4, 5, 8, 9, 10, 11, 12, Township 7 South, Range 7 East; portions of Section 1, and all of Sections 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, Township 7 South, Range 8; and portions of Sections 6 and 7, Township 7 South, Range 9 East of the San Bernardino Baseline and Meridian.

This EIR assesses the environmental impacts that may result as a consequence of approval and implementation of the proposed land use scenario and the Plan's goals, policies and programs, as well as buildout of the entire area. The following discussion briefly summarizes each category of analysis, including existing conditions, project impacts and applicable mitigation measures recommended to reduce impacts to acceptable or insignificant levels. Levels of impact include the following:

Significant Impacts: Those impacts which constitute a potentially significant adverse change in the environment.

Insignificant Impacts: Those impacts which, by virtue of the environmental conditions, predisposing existing development, or the implementation of mitigation measures, are reduced to acceptable or "insignificant" levels.

Unavoidable Impacts: Those impacts which occur as a result of project development whose adverse effects cannot be entirely eliminated or reduced to a level of insignificance.

Areas of Controversy and Issues to be Resolved: The City Council held a number of public meetings to discuss the potential land use distribution associated with the General Plan update. During those meetings, several land owners, and/or their representatives, requested that changes to the land use map be made to specific properties. These requests will be considered through the public hearing process prior to adoption of the General Plan. The City also conducted a series of public meetings associated with Annexation No. 12 and the Sphere of Influence Amendment. Issues still to be resolved in this area include lowering residential densities in both areas, the preservation of the equestrian lifestyle, and the loss of agricultural resources.

Existing Conditions	Project Impacts	Mitigation Measures
LAND USE COMPATIBILITY The City of La Quinta is a low density, resort residential community located in the Coachella Valley, a low-lying desert environment in central Riverside County. The City's population is approximately 24,240 residents. Its incorporated area includes approximately 20,254 acres, and the General Plan planning area includes an additional 33,244 acres outside the City boundaries. Current development patterns within the City are guided by the City's existing Comprehensive General Plan, which allows for the ultimate development of about 37,018 dwelling units, most of which are in the 0 to 8 units per acre density range. The existing General Plan also provides for commercial development, including visitor-serving hotel and resort development. Under the existing Plan, the planning area could ultimately realize about 15.5 million square feet of commercial space and about 20.1 million square feet of industrial space. Public and private open spaces account for approximately 12,357 acres. The annexation area covers an area of 5,419.9 acres, primarily proposed for residential development. The SOI amendment area totals 8,205 acres, also primarily designated for residential development.	The proposed General Plan can facilitate the development of approximately 78,952 dwelling units, assuming that buildout occurs at 75% of the maximum densities permitted. This represents about a 113% increase over the number of units allowed by the existing General Plan, and is largely the result of converting lands in the south-central portion of the planning area from agricultural to low-density residential uses. The proposed Plan also facilitates about 3.5 million more square feet of commercial space, and 8.7 million more square feet of industrial space than the existing General Plan. No significant incompatibilities with internal or external land uses are expected to result from the proposed Plan. The proposed conversion of agricultural lands in the annexation area and SOI amendment area is consistent with existing development trends in the area. The potential for traffic noise impacts on residential lands is addressed through General Plan policies and programs in other sections of this EIR.	To assure that potential impacts associated with individual development projects are adequately mitigated, individual projects shall be fully assessed during the City's project review process. All future residential developments occurring on lands within an existing or projected 65 dBA or higher noise contour shall be required to prepare a noise impact assessment and mitigation plan that minimizes impacts to outdoor living spaces and assures a maximum interior noise level of 45 CNEL. Alternatives: The No Project and Less Intense Alternatives would result in fewer dwelling units, and less commercial and industrial square footage than the Recommended Alternative, and would therefore reduce the impacts to land use compatibility.

Existing Conditions	Project Impacts	Mitigation Measures
AGRICULTURAL RESOURCES The General Plan planning area contains approximately 19,938 acres of land currently designated for agricultural land uses. These lands are generally concentrated east of Monroe Avenue and south of 52nd Avenue (see Exhibit III-1). All lands designated for agricultural purposes are currently under the jurisdiction of Riverside County. The Riverside County General Plan designates them for Agricultural (AG) development, a designation which permits agricultural cultivation, associated uses (including limited commercial, industrial, and single-family residential development at a maximum density of one dwelling unit per ten acres), and open space. Approximately 16,152 acres (81%) of land designated for agricultural uses in the planning area are currently developed, and 3,786 acres (19%) are vacant. There are currently a total of 5,411.99 acres of land under Williamson Act contracts within the planning area.	Under the Recommended General Plan, approximately 6,280 acres are designated for Very Low Density Residential (VLDR) development with an Agricultural Overlay. The Recommended General Plan designates approximately 11,335 acres for Low Density Residential (LDR) development with an Agricultural Overlay. This designation provides for large lot single-family development, with densities up to 2 dwelling units per acre. The Agricultural Overlay provides for the continuation of existing agricultural activity at the discretion of the landowner. This land use designation provides a transition between agricultural lands and more intense urban uses and promotes a progression of compatible land uses. Project impacts are expected to be significant in the long term.	Mitigation measures included to reduce the potential impacts associated with agricultural resources include the preservation of the Agricultural Overlay; the creation of buffer areas of at least 100 feet for new projects adjacent to existing agricultural land uses; adherence to local, state and federal regulations to ensure that safe and effective practices occur on agricultural lands; and the adherence to noise standards, as enumerated in the City's Municipal Code. Alternatives: The No Project Alternative would result in fewer residential units, and would preserve the current agricultural land use designation placed on the land by the County, although General Plan Amendments and Specific Plans would still be possible. This Alternative would have a lower impact on agricultural resources.

Existing Conditions	Project Impacts	Mitigation Measures
TRAFFIC/CIRCULATION The General Plan planning area is connected to the rest of the Coachella Valley by a network of arterials and state and interstate highways, including State Highways 86 and 111 and Interstate-10. A detailed traffic analysis was conducted on the planning area circulation system and is included in the EIR appendices. The study indicates that the City's roadway segments are currently operating within capacity, and key intersections are operating within acceptable levels-of-service. Sunline Transit Agency provides public transit services to the planning area along four bus routes. Although there is no direct rail service to the planning area, passenger and rail service is available in Indio and Coachella. The Palm Springs International Airport serves as the primary air transportation link for the City and the Coachella Valley. The Desert Resorts and Bermuda Dunes Airports are located within the planning area and accommodate smaller planes and business jets.	Based on the proposed roadway network set forth in the Draft General Plan, buildout of the planning area is expected to generate approximately 1,200,150 daily vehicle trip-ends. At project buildout, key intersections are expected to continue to operate at acceptable Levels-of-Service (LOS D or better). However, fifteen roadway segments are expected to exceed typical Average Daily Traffic (ADT) capacities (v/c ratios of 1.0 or greater), which could constitute a significant impact on the local circulation system. A series of design upgrades may allow these segments to operate acceptably, but impacts at these intersections are expected to be significant.. Traffic in the annexation area and SOI amendment area is expected to operate within acceptable levels at buildout. The proposed Plan includes a comprehensive Golf Cart Route System which will encourage and facilitate safe golf cart usage in key locations within the planning area.	The proposed General Plan establishes a wide range of roadway and intersection improvements and systems management directives that are expected to reduce project-related impacts. Some such improvements include: the assignment of appropriate roadway classifications and cross-sections to roadway segments, the construction of intersection improvements (dual left turn lanes, right turn lanes, and signal phasing improvements), the implementation of an on-going intersection monitoring program, and the construction of a roundabout intersection at the Jefferson Street/Avenue 52 intersection. In addition, the City may need to consider restricting the number of access points along high volume arterials, including Washington and Jefferson Streets and Highway 111. The City shall continue to develop and implement Transportation Demand Management (TDM) strategies in an effort to maximize the use of alternative modes of transportation and extend the capacity of existing roadways. Alternatives: The No Project and Less Intense Alternatives would result in all intersections operating at Level of Service D or better, and would therefore lower the impacts to the circulation level to less than significant levels.

Existing Conditions	Project Impacts	Mitigation Measures
SOILS AND GEOLOGY The San Andreas Fault Zone is located less than three miles northeast of the City of La Quinta. Although no evidence of active or potentially active faulting has been found within the General Plan planning area, several faults in the Coachella Valley region have the potential to generate strong ground shaking that could impact the La Quinta community. Given its proximity to these faults, portions of the planning area are also susceptible to other geotechnical conditions, including liquefaction, seismically induced settlement, ground subsidence, and slope instability. The northernmost portion of the planning area and lands adjacent to the Whitewater River are located within wind erosion hazard zones, which are characterized by suspended dust and blowing sand.	Buildout of the proposed General Plan, annexation area and SOI amendment area will result in the development of major and minor projects, ranging from single family additions to mixed-use master planned developments. While buildout of the proposed Plan is not expected to significantly increase risks associated with geotechnical hazards, groundshaking and other seismically-induced hazards will continue to pose a threat to future development. Some development facilitated by the proposed Plan may require extensive site grading and earthwork. Ground surface disruption in areas susceptible to severe wind erosion could increase dust and other particulates in the air.	The proposed General Plan includes a wide range of policies and programs designed to reduce exposure to geotechnical hazards to the greatest extent practical. All building design shall be in accordance with the Uniform Building Code and/or International Building Code and the seismic design parameters of the Structural Engineers' Association of California. The General Plan requires that site-specific soil studies and other geotechnical investigations be performed for future projects, where necessary. Furthermore, the Plan requires mitigation against the effects of wind erosion before and after site development. Alternatives: All alternatives represent the construction of new development which would be subject to the same standards imposed under the Recommended Alternative. No alternative is considered preferable as regards impacts associated with soils and geology.

Existing Conditions	Project Impacts	Mitigation Measures
HYDROLOGY The General Plan planning area is located within a subtropical desert climate, which is isolated from moist maritime air masses. Although mean annual rainfall is very low, the region is susceptible to occasional high-intensity thunderstorms, substantial runoff and potentially significant flooding. Portions of the planning area are contained within the 100- and 500-year flood zones, as designated by the Federal Emergency Management Agency (FEMA). The planning area includes a system of flood control improvements that includes the Coachella Valley Stormwater Channel, La Quinta Evacuation Channel, Upper Bear Creek Drainage System, East La Quinta Channel, and Lake Cahuilla. The Coachella Valley Water District is responsible for the construction and management of regional drainage facilities that convey runoff through the City. The City of La Quinta is responsible for the management of drainage within its boundaries.	Buildout of the planning area, including the existing City limits, and annexation No. 12 and the concurrent SOI amendment area will result in increased runoff associated with impervious and hardscaped surfaces. Future development also has the potential to alter existing drainage patterns, and in some cases, may result in the accumulation of debris during large storms. The conversion of agricultural lands to low-density residential uses, in particular, could result in increased runoff and alterations in existing drainage patterns. Nonetheless, these potential impacts are expected to be adequately mitigated, and implementation of the proposed General Plan is not expected to significantly increase local or regional flooding hazards.	The proposed land use plan reinforces a low density development pattern, which effectively limits the amount of impermeable surfaces to be developed within the planning area. The proposed Plan includes a wide variety of policies and programs that require the continued development of stormwater control facilities, the evaluation and improvement of existing flood control infrastructure, and the continued use of retention basins to facilitate percolation of stormwater runoff. Development proposals with the potential of generating significant runoff are also required to prepare and submit hydrology studies and mitigation plans. The City will have the capacity to review and evaluate detailed hydrology analyses on a project-by-project basis. The proposed Plan encourages inter-agency planning and cooperation with regard to regional flood control. Alternatives: All alternatives represent the construction of new development which would be subject to the same standards imposed under the Recommended Alternative. No alternative is considered preferable as regards impacts associated with flooding and hydrology.

Existing Conditions	Project Impacts	Mitigation Measures
WATER QUALITY/RESOURCES The lower Thermal subarea of the Whitewater River subbasin is the primary source of groundwater for the planning area. Data indicate that the top of the water table is present at depths ranging from 300 to 600 feet below the ground surface. Groundwater levels in the lower Thermal subarea have fluctuated historically, and have been declining since the early 1980's. The Whitewater River subbasin is currently recharged with Colorado River water, which is conveyed through the Colorado River Aqueduct. Limited Colorado River water is also imported to the Coachella Canal in the southeastern Coachella Valley, and is used for irrigation purposes. Domestic water service is provided to the majority of the planning area by the Coachella Valley Water District (CVWD). The Myoma Dunes Mutual Water Company provides water to the Bermuda Dunes community in the northern planning area. CVWD has operated a pilot recharge facility south of Lake Cahuilla since 1996, and has demonstrated that groundwater recharge at this location is feasible and could benefit the La Quinta community in the future.	At buildout, all consumers in the planning area (including the annexation and SOI amendment areas) could raise total city-wide domestic water consumption to approximately 114.3 million gallons of water per day. It is estimated that about 40% of domestic water consumed, including a percentage of irrigation water applied to landscaping, is re-absorbed into the groundwater table and is not lost. Actual impacts may be more or less, depending upon the type and extent of development that actually occurs in the planning area, the density at which residential development occurs, and the type of landscaping and water-dependent amenities that are constructed within each project site. Water quality will also be impacts by buildout of the proposed Plan. The Plan cites the need to implement the National Pollutant Discharge Elimination System (NPDES), and in some instances, to require the construction of stormwater intercept and treatment systems that reduce the amount of contaminants flowing into surface and subsurface groundwater resources.	The proposed General Plan promotes the protection and wise use of the domestic water supply, and includes a wide range of policies and programs designed to assure its long-term availability. Policies and programs set forth in the Plan include the continued review of development plans by the City, CVWD and Myoma Dunes Mutual Water Company to determine its potential impacts on the local groundwater supply. The Plan encourages the use of drought-tolerant plant materials and efficient irrigation systems, and directs the City to continue requiring on-site retention basins as a means of enhancing groundwater recharge. Under the proposed Plan, the City shall support CVWD's efforts to expand a recharge facility in the vicinity of Lake Cahuilla, and to utilize tertiary treated water to reduce water demand. To further protect water quality, the City will encourage the connection of existing and future development to the sewage treatment system operated by CVWD, and assure compliance with the provisions of the NPDES. Alternatives: Both the No Project and Less Intense Alternatives would result in a reduction in the demand for water resources, and therefore represent a reduction in impacts.

Existing Conditions	Project Impacts	Mitigation Measures
BIOLOGICAL RESOURCES The City of La Quinta is located in a low desert environment with high annual temperatures and low precipitation. The region's unique geophysical environment is capable of supporting diverse and occasionally highly specialized species of plants and animals, including the Coachella Valley milk vetch, Coachella Valley fringe-toed lizard, desert tortoise, and Peninsular bighorn sheep. Ongoing urban development and agricultural activity in the Coachella Valley have resulted in the modification or removal of native habitat for these and other species, and have increased the potential for their endangerment. Lands in the southwestern portion of the planning area are located within the Santa Rosa Mountains Wilderness and the Santa Rosa Mountains State Game Refuge, which are managed primarily for the protection of the Peninsular bighorn sheep.	Development facilitated by the proposed General Plan, annexation No. 12 and the buildout of the SOI area will contribute to ongoing habitat fragmentation, degradation and loss in the Coachella Valley. Additional impacts may include the removal of breeding and foraging habitat, the removal of native vegetation, and the introduction of exotic, invasive and/or other non-native plant species. Continued development may also result in increased off-road vehicle use, illegal dumping and predation of native species by domestic pets. Nonetheless, the General Plan, annexation and SOI land use designations all propose to maintain a low density development pattern and preserve sensitive biological areas as undevelopable open space. Implementation is not expected to have a significant adverse impact on biological resources.	The General Plan sets forth a wide range of policies and programs designed to minimize potential impacts to wildlife species, and takes advantage of opportunities to enhance wildlife habitat wherever possible. The proposed land use plan designates all areas above the toe of slope in the Santa Rosa and Coral Reef Mountains as undevelopable Open Space. The Plan requires that species-specific surveys be performed where necessary, and that appropriate mitigation fees be paid and/or permits acquired. The Plan supports the establishment of palm tree groves and other native vegetation, and promotes the integration of conservation principles in the design and development of roadways, retention basins and private open space areas. The General Plan strongly supports the preparation and implementation of the Coachella Valley Multi-Species Habitat Conservation Plan. Alternatives: All alternatives represent the construction of new development which would be subject to the same standards imposed under the Recommended Alternative. No alternative is considered preferable as regards impacts associated with biological resources.

Existing Conditions	Project Impacts	Mitigation Measures
CULTURAL RESOURCES Because of its location along the shoreline of ancient Lake Cahuilla, the City of La Quinta contains a dense concentration of archaeological resources. Records indicate that approximately 372 archaeological sites, most of which are associated with the prehistoric culture of the Cahuilla Indians, have been recorded within or in the immediate vicinity of the planning area. Historic resources in La Quinta generally include buildings of late 1930s and 1940s vintage. The City has taken a proactive role in assuring the documentation and preservation of historic and cultural resources, has adopted its own Historic Preservation Ordinance, and maintains a local historical resources inventory.	Considering the high concentration of known archaeological and historic sites within the planning area, it is possible that additional sites and structures may be discovered during grading and construction activity. Future development near canyons, alluvial fans, and in the eastern planning area (including annexation No. 12 and the SOI amendment area), which is now largely in active cultivation, may be particularly sensitive for the presence of archaeological resources. Potential impacts may include site disturbance and/or destruction. The proposed General Plan requires that extensive site surveys be conducted on all future development projects, where necessary, to determine the presence and significance of cultural resources.	The proposed General Plan requires the routine updating of the City's historic resources inventory, and requires that the City develop a strategy for conducting cultural resource surveys on currently unsurveyed areas. The City shall also develop a system of incentives and regulations that encourage the preservation and/or rehabilitation of privately owned historic sites. All development projects requiring discretionary approval shall be reviewed by a qualified archaeologist before final approval to identify potential project-related impacts and to establish appropriate mitigation measures. The City shall consider incorporating historic zoning districts and/or overlays into its zoning ordinance. Alternatives: All alternatives represent the construction of new development which would be subject to the same standards imposed under the Recommended Alternative. No alternative is considered preferable as regards impacts associated with cultural resources.

Existing Conditions	Project Impacts	Mitigation Measures
AIR QUALITY Air quality in the City of La Quinta and Coachella Valley is generally good to excellent. The principal pollutants which adversely affect air quality in the region are ozone and particulate matter (PM₁₀). The Coachella Valley is classified as a “severe-17” ozone non-attainment area under the federal Clean Air Act. Monitoring data indicate that a substantial amount of ozone is produced and transported to the Coachella Valley from communities to the west. PM₁₀ consists of fine suspended particles that are byproducts of road dust, sand, diesel soot, and wind storms. The Coachella Valley is designated as a federal “non-attainment” area for PM₁₀; however, monitoring data indicate that PM₁₀ emissions have been reduced substantially in recent years, and the region is currently being considered for attainment status.	Implementation of the proposed Plan, and buildout of annexation No. 12 and the SOI area, can be expected to result in an increased potential for air quality degradation in the City and Coachella Valley. The production of air pollutants will be directly associated with the type and extent of development taking place in the community. Motor vehicle activity and the heating and cooling of buildings will also contribute to the production of air pollutants, both locally and outside the Valley. While development facilitated by the proposed Plan, annexation or SOI amendment will contribute to an incremental increase in regional air pollution, none of these actions are expected to facilitate any development that will, in and of itself, result in a significant increase in air pollution. A quantitative analysis of emissions is provided in Section III.	The proposed General Plan requires that development and grading permits be reviewed and conditioned to assure that pollutant emissions resulting from proposed projects are minimized. The Plan directs the City to participate with CVAG and SCAQMD in the monitoring of all pollutants of regional concern. The proposed land use plan has been designed to provide a buffer between air pollution point sources and sensitive receptors, and to maintain a balance of residential, commercial and industrial land uses. Under the proposed Plan, the City shall encourage the phasing and staging of development projects to assure the lowest construction-related emissions practical, and shall require the use of water trucks and other on-site measures which limit fugitive dust emissions. The City will initiate and encourage the use of alternative, clean energy sources. Alternatives: The No Project Alternative would represent the most significant reduction in air pollution, closely followed by the Less Intense Alternative. All alternatives, however, represent an increase in air pollution in the area.

Existing Conditions	Project Impacts	Mitigation Measures
NOISE The existing noise environment in the City of La Quinta can be characterized as relatively quiet, with the majority of noise being generated by motor vehicle traffic on highways and major arterials. Occasional, but less intrusive noise is contributed to the planning area by rail traffic along the Southern Pacific corridor and air traffic associated with the Bermuda Dunes and Desert Resorts Airports. Other community noise sources include construction, mechanical and industrial operations.	Noise impacts are expected to be primarily generated by increasing traffic volumes as the City proceeds to build out. The noise analysis found that the Recommended Alternative of the General Plan will result in unmitigated noise levels ranging from 61.3 to 73.3 dBA CNEL at 100 feet from centerline in the City and planning area. Depending on the adjacent land use, mitigation measures will be required to reduce the noise levels to an acceptable level.	The General Plan includes a policy which requires that the City adhere to the noise standards established in Community Noise and Land Use Compatibility, Table 6.1 of the Master Environmental Assessment. This noise standards allows a standard of 65 dBA CNEL for exterior noise levels adjacent to sensitive receptors such as residences, hospitals and convalescent homes. The General Plan also requires that new development study the noise environment, and mitigate any noise impacts at a new project site. Alternatives: All alternatives represent the construction of new development which would result in increased noise levels which would be required to meet City noise standards. No alternative is considered preferable as regards impacts associated with noise.

Existing Conditions	Project Impacts	Mitigation Measures
VISUAL RESOURCES The Coachella Valley is located within a low desert trough surrounded on the south, west and north by the rocky slopes of the Santa Rosa, San Jacinto, San Bernardino and Little San Bernardino mountain ranges. The region's highest peaks dominate the north end of the valley and include Mt. San Jacinto, which rises to 10,804 feet above sea level, and Mt. San Gorgonio, which rises to 11,502 feet. These and other peaks are located at some distance from the planning area, and views may be blocked by development and vegetation. Nonetheless, they contribute significantly to the rich visual resources of the region. The Santa Rosa and Coral Reef Mountains comprise the southwesterly boundary of the planning area. Large and smaller alluvial fans and sandy/rocky washes emanate from the mountains. The valley floor is largely composed of sand dunes and fields and low-lying agricultural lands. Elevations within the planning area range from about 190 feet below sea level in the southeast, to approximately 1,600 feet above sea level at the peak of the Coral Reef Mountains.	Implementation of the proposed General Plan is expected to have limited impacts on the visual resources of the City and the Coachella Valley. The Plan, annexation and buildout of the SOI area will facilitate the development of a variety of residential, commercial and limited industrial structures, as well as golf courses and other resort developments. The proposed land use plan will permit low-density residential development in the eastern portion of the planning area, which could remove agricultural lands from cultivation and alter existing viewsheds in this area. Nonetheless, development facilitated by the Plan will continue to be limited to low and medium density, low elevation structures. Although new structures, signage, lighting and utility infrastructure will result in an incremental increase in visual clutter, these potential impacts can be mitigated to insignificant levels.	The proposed General Plan enhances the City's ability to regulate and prevent significant viewshed, while also mandating continued protection of the City's visual resources. The Plan preserves the high visual quality of the Santa Rosa and Coral Reef Mountains by designating them as Open Space with a Hillside Overlay. The Plan calls for the continued development of master planned communities, which are characterized by consolidated open space, consistent architectural themes, and building height restrictions. New development will incorporate landscape designs and materials that complement the native desert. The City shall encourage the undergrounding of utility lines, and coordinate with utility providers to assure that substations, control facilities and other equipment is shielded from view. Development proposed along designated scenic highways shall be reviewed by the City for compatibility with the natural and built environments. Alternatives: All alternatives represent the construction of new development. The No Project Alternative would have the least impact on visual resources, insofar as larger areas would be preserved for agricultural use, and would not be built upon.

Existing Conditions	Project Impacts	Mitigation Measures
PUBLIC SERVICES/FACILITIES The City is well-served by a full range of public and quasi-public services and facilities. The Desert Sands and Coachella Valley Unified School Districts provide public education for grades K through 12, and are planning to open several new schools in the near future. The City library is a branch of the Riverside County Library System. A new, larger library is currently under construction. Police and fire protection are provided on a contractual basis by the Riverside County Sheriff's and Fire Departments. Regional healthcare is available at John F. Kennedy Memorial Hospital, Desert Hospital, and Eisenhower Medical Center. Solid waste management services are provided by Waste Management of the Desert. Sewage collection and treatment services are provided the planning area by the Coachella Valley Water District; however, portions of the planning area continue to operate on individual septic systems. Domestic water is provided to the planning area by CVWD and the Myoma Dunes Mutual Water Company. Electrical, natural gas, and telephone services are widely available throughout the community.	The adoption and implementation of the proposed General Plan, annexation and sphere of influence amendment will result in a cumulative increase in demand for public services and facilities, but is not expected to generate significant adverse impacts on these services. Public services such as police and fire protection can be scaled up to meet growing demand as the community expands. Area schools have limited additional capacity, and are expected to continue to struggle until more secure funding sources are developed. Continued growth will require the phasing out of septic systems and the expansion of a city-wide sewage system. Backbone infrastructure for natural gas, telephone, cable, and electricity are already in place throughout the planning area.	The proposed Plan directs the City to regulate development in a manner which facilitates the orderly and logical extension of infrastructure. The Plan also encourages close coordination and cooperation between the City, County, school districts, and utility providers to assure the immediate and long-term availability of facilities and services. The City is tasked with evaluating alternative financing methods for the extension of a city-wide sewer system. With the impending closure of the Edom Hill Landfill, the City shall work closely with Waste Management of the Desert to evaluate alternative landfill sites and to extend curb-side recycling services to the Thermal area. Alternatives: All alternatives represent the construction of new housing units and commercial and industrial development, and would therefore have an impact on public facilities. However, the No Project and Less Intense Alternatives would have lower impacts on these services at buildout.

Existing Conditions	Project Impacts	Mitigation Measures
SOCIO-ECONOMIC RESOURCES The City's economy is largely based upon the promotion of a resort lifestyle, and it enjoys an excellent tourist image, enhanced by the national recognition of the La Quinta Hotel and PGA West. The City has positioned itself as a sub-regional retail center for the eastern Coachella Valley, attracting such large retailers as WalMart and Home Depot, and was the fastest growing city in the Coachella Valley from 1990 to 1998. Demographic trends in La Quinta indicate the emergence of a new affluent seasonal population, which plays an important role in the City's economy. The greatest portion of the work force is employed in sales, executive/managerial, and construction-related positions.	The socio-economic impacts associated with buildout of the proposed General Plan, annexation area and SOI amendment area are expected to be positive. To help diversify the City's economy, the Plan establishes a mix of commercial, resort-oriented and industrial development which is intended to maximize existing and planned facilities, services and infrastructure. Inasmuch as future growth will result from continued development and the generation of new jobs, there is expected to be an overall balance between employment and housing needs.	The proposed General Plan maximizes the City's economic development potential, while also establishing a balanced mix of housing and employment opportunities. Although the City has positioned itself as a sub-regional retail center in the eastern-central Coachella Valley, it must continue to respond to growing competition among Coachella Valley communities for new retail development. The City also must continue to strengthen its reputation as a world-class luxury resort community, while simultaneously diversifying its economic base. In this regard, the City shall pursue joint efforts with local and regional agencies regarding the expansion of the Desert Resorts Airport to support the transportation needs of the City's resort and retail industries. The City shall also promote further investment in art, theater and related development proposals that enhance the City's cultural resources and image as a luxury resort community. Furthermore, the City shall seek financing mechanisms which facilitate infrastructure improvements in the Village and the Highway 111 commercial corridor. Alternatives: Both the No Project and Less Intense Alternatives result in greater revenues to the City at buildout, and therefore would be more beneficial.

10/10/2010 10:10:10

Date	Time	Location	Activity	Remarks
10/10/2010	10:10:10	10:10:10	10:10:10	10:10:10
10/10/2010	10:10:10	10:10:10	10:10:10	10:10:10
10/10/2010	10:10:10	10:10:10	10:10:10	10:10:10
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CITY OF LA QUINTA

DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE COMPREHENSIVE GENERAL PLAN, ANNEXATION NO. 12 AND SPHERE OF INFLUENCE AMENDMENT

I. INTRODUCTION AND PROJECT DESCRIPTION

A. Lead Agency

The City of La Quinta is the lead agency responsible for the preparation of this Environmental Impact Report (EIR). The contact person is Mr. Fred Baker, Principal Planner. The City's mailing address is 78-495 Calle Tampico, La Quinta, California 92253.

B. Introduction

This Environmental Impact Report has been prepared in conjunction with the preparation of the Comprehensive General Plan for the City of La Quinta. The EIR is an integral part of the General Plan development process. General Plans and their amendments are considered "projects" under the California Environmental Quality Act (CEQA), and therefore require thorough assessment in the form of an EIR.

This EIR has been prepared to review the environmental constraints and opportunities associated with the adoption of the proposed La Quinta Comprehensive General Plan. In addition to assessing the impacts associated with the City General Plan and instituting mitigation measures, the EIR is designed to be used as an information database to facilitate the streamlining, or tiering of the environmental review process for subsequent projects proposed in the City.

This Environmental Impact Report addresses the City, its sphere-of-influence (SOI), and lands outside the SOI. It incorporates technical data collected over a broad area and analyzes General Plan impacts within this context. The EIR summarizes the major goals and policies of the General Plan, as well as the various land use categories set forth therein.

A wide range of environmental issues associated with the implementation of the La Quinta General Plan are assessed throughout the EIR. These include land use compatibility, traffic and circulation, flooding and drainage, geotechnical and seismic safety, air quality, biological and archaeological resources, noise impacts and visual resources. Other areas of concern include the availability of

public services and facilities, and the socio-economic impacts associated with General Plan implementation.

Section II of this document (Environmental Setting) describes the environmental setting of the City and region, and identifies environmental resources and constraints. It also describes existing regional infrastructure, land use patterns and natural resources.

Section III includes a comprehensive evaluation of land and resources specific to the City of La Quinta, its sphere-of-influence and its planning area. It discusses potential impacts to the physical environment associated with the adoption of proposed General Plan land use designations. This evaluation includes analysis of population, patterns of development, alterations to the physical environment, and the availability of public services and facilities. Because some aspects of the General Plan may result in significant environmental impacts, mitigation measures are offered, where appropriate to reduce these impacts.

The EIR also includes discussions of short-term use and long-term productivity of the affected environment. The irreversible and irretrievable commitment of resources, including water resources, biological habitat and air quality, are assessed to facilitate long-range planning. Growth inducing and cumulative impacts associated with adoption of General Plan land uses are also examined. Possible and appropriate alternative projects are identified, in addition to other mandated CEQA issues. Finally, in Section IX, persons, organizations and documents consulted or referenced are cited.

C. CEQA and Other Requirements

This Environmental Impact Report has been prepared in accordance with the California Environmental Quality Act (CEQA) Statutes (Public Resources Code Section 21000-21177) and CEQA Guidelines of 1992 (Administrative Code Section 15000 et. seq.), as amended. CEQA states that the adoption of a general plan, element thereof, or amendment requires the making of findings concerning the identified significant environmental effects (Title 14, California Administrative Code Section 15088). The EIR findings must be supported by substantial evidence and must explain how significant effects have been or should be mitigated. Section 15080 of the CEQA Guidelines, 1992 requires the preparation of an initial study (see Appendix A). In the event that potentially significant impacts are identified that may result from the “project,” an EIR must be prepared.

The EIR is intended as an informational and analytical document which provides decision-makers, the general public, and other responsible or interested agencies with an objective assessment of the environmental impacts associated with the General Plan. The mitigation measures proposed herein are intended to eliminate or reduce to an acceptable levels the environmental impacts associated with the General Plan.

The Final EIR and the mitigation measures set forth herein shall become part of the “project” approval and an integral part of the General Plan. If, after completion of the Final EIR, the decision-making body of the City chooses to approve the General Plan without applying any or

some of the mitigation measures set forth in the EIR, or in the event of unavoidable significant impacts, then a “Statement of Overriding Considerations” must be prepared, demonstrating that the benefits of the proposed project outweigh the unavoidable significant environmental impacts which may result from implementation of the Plan.

In addition to the City departments responsible for review of the Plan, certain local, state, federal and regional agencies will review and comment on this draft EIR. These agencies include, but are not limited to the California Office of Planning and Research, California Department of Fish and Game, U.S. Department of the Interior Bureau of Land Management, Southern California Association of Governments (SCAG), South Coast Air Quality Management District (SCAQMD), Coachella Valley Water District, and utility purveyors serving the planning area. Several other public and quasi-public agencies, and private for-profit and non-profit organizations will also review this document.

This EIR is meant to serve at a program level. Additional environmental documentation, such as environmental assessments and environmental impact reports, may be required for specific plans, subdivisions, land use plans and other development applications which may be processed by the City.

D. Project Location and Description

1. Project Location

The boundaries of the General Plan planning area can generally be described as follows: bounded on the north by Interstate-10, on the south by Avenue 66, and on the west and southwest by the Santa Rosa Mountains. The southern portion of the planning area is bounded on the east by State Highway 111, while the northern portion is generally bounded on the east by Monroe Street.

The incorporated City limits of the City of La Quinta can be more specifically described as including: portions of Section 25 and all of Section 36, Township 5 South, Range 6 East; Sections 1, 12, 13, 24, and 25, Township 6 South, Range 6 East; portions of Sections 18, 19, 20, 28, 29, and 30, and all of Sections 31 and 32, Township 5 South, Range 7 East; portions of Sections 10, 22, and 28, and all of Sections 4, 5, 6, 7, 8, 9, 15, 16, 17, 18, 19, 20, 21, 29, 30 and 33, Township 6 South, Range 7 East; Sections 4 and 5, Township 7 South, Range 7 East, San Bernardino Baseline and Meridian.

Existing sphere-of-influence lands include the following: portions of Section 18, Township 5 South, Range 7 East; and portions of Sections 10, 22, 27 and 28, Township 6 South, Range 7 East of the San Bernardino Baseline and Meridian.

Annexation No. 12 includes 5,419.9 acres generally located east of the existing City limits, south of Avenue 52, west of Jackson Street and north of Avenue 62; the sphere of influence amendment includes 8,205.04 acres, extending from Avenue 50 on the north, Jackson Street on the west, Avenues 62 and 66 on the south, and Polk, Harrison and Van Buren Streets on the east.

Annexation No. 12, the proposed Sphere of Influence Amendment and planning area lands encompass: portions of Sections 6, 7, 8, 16, 17, 18, Township 5 South, Range 7 East; portions of Sections 1 and 13, and all of Sections 11, 12, 14, 23, 24, 25, 26, 34, 35, 36, Township 6 South, Range 7 East; portions of Sections 22, 23, 26, 35, 36, and all of Sections 19, 20, 21, 27, 28, 29, 30, 31, 32, 33, 34, Township 6 South, Range 8 East; Sections 1, 2, 3, 8, 9, 10, 11, 12, Township 7 South, Range 7 East; portions of Sections 1, 6, 7, and all of Sections 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, Township 7 South, Range 8 East of the San Bernardino Baseline and Meridian. Also see Exhibit I-2 and I-3.

2. Project Description

This EIR has been prepared to review the environmental constraints and opportunities associated with the adoption of the proposed La Quinta Comprehensive General Plan, a proposed amendment to the City's sphere of influence, and a proposed annexation of lands to the east of the existing City limits (Annexation No. 12). In addition to the Program EIR, the General Plan Update will consist of two separate documents: 1) the Master Environmental Assessment (MEA), which addresses existing conditions and the level of services currently provided in the City, sphere of influence and planning area, and 2) the General Plan policy document, which includes a series of discussion topics encompassed in major chapters, or elements. Each element includes a purpose statement, a brief description of the regulatory environment, and goals, policies and programs.

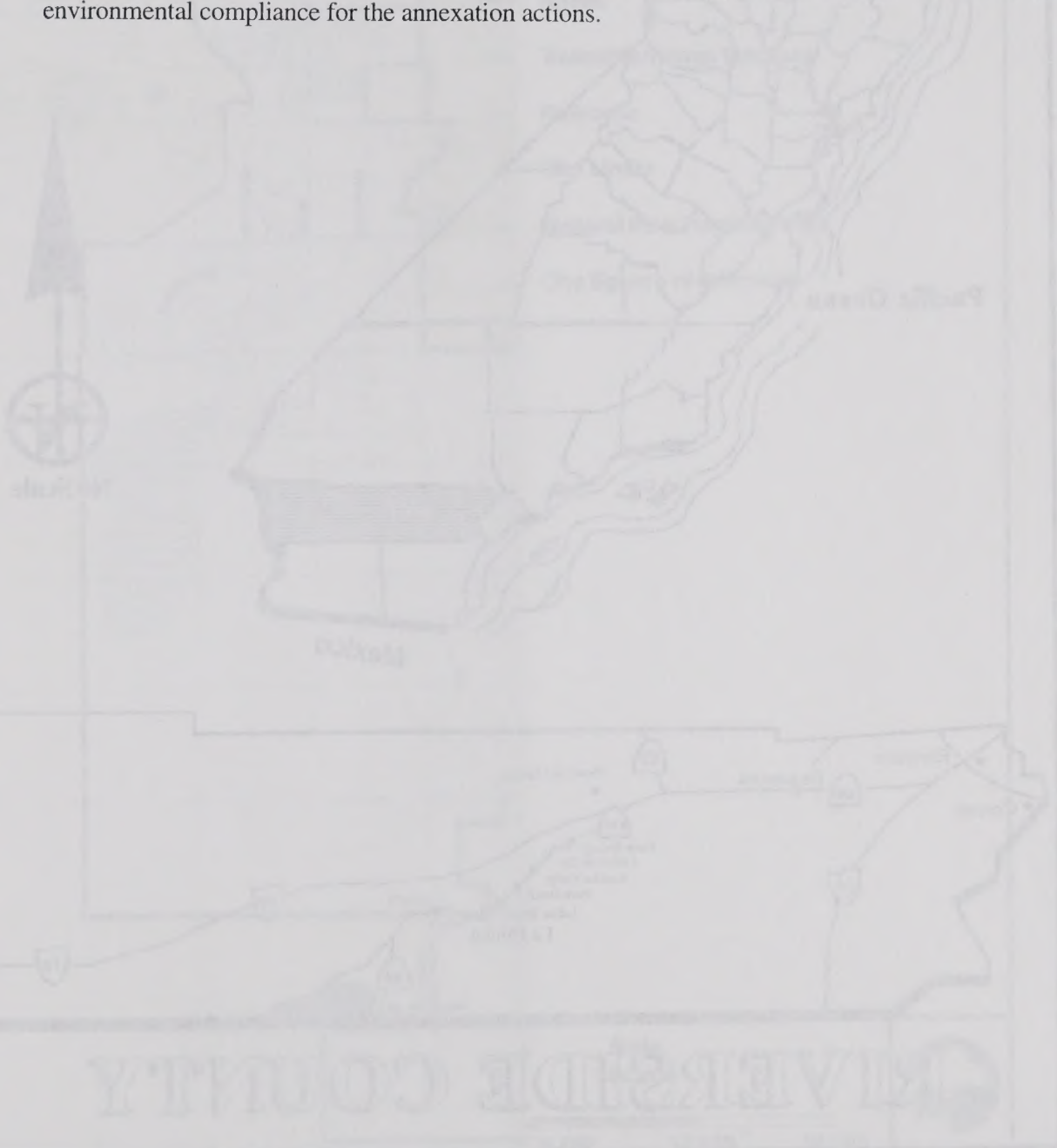
This Environmental Impact Report addresses the City, its sphere-of-influence (SOI), and lands outside the SOI. It incorporates technical data collected over a broad area and analyzes General Plan impacts within this context. The EIR summarizes the major goals and policies of the General Plan, as well as the various land use categories set forth therein. In addition to assessing the impacts associated with the City General Plan and instituting mitigation measures, the EIR is designed to be used as an information database to facilitate the streamlining, or tiering of the environmental review process for subsequent projects proposed in the City.

A wide range of environmental issues associated with the implementation of the La Quinta General Plan are assessed throughout the EIR. These include land use compatibility, agricultural resources, traffic and circulation, flooding and drainage, geotechnical and seismic safety, air quality, biological and archaeological resources, noise impacts and visual resources. Other areas of concern include the availability of public services and facilities, and the socio-economic impacts associated with General Plan implementation.

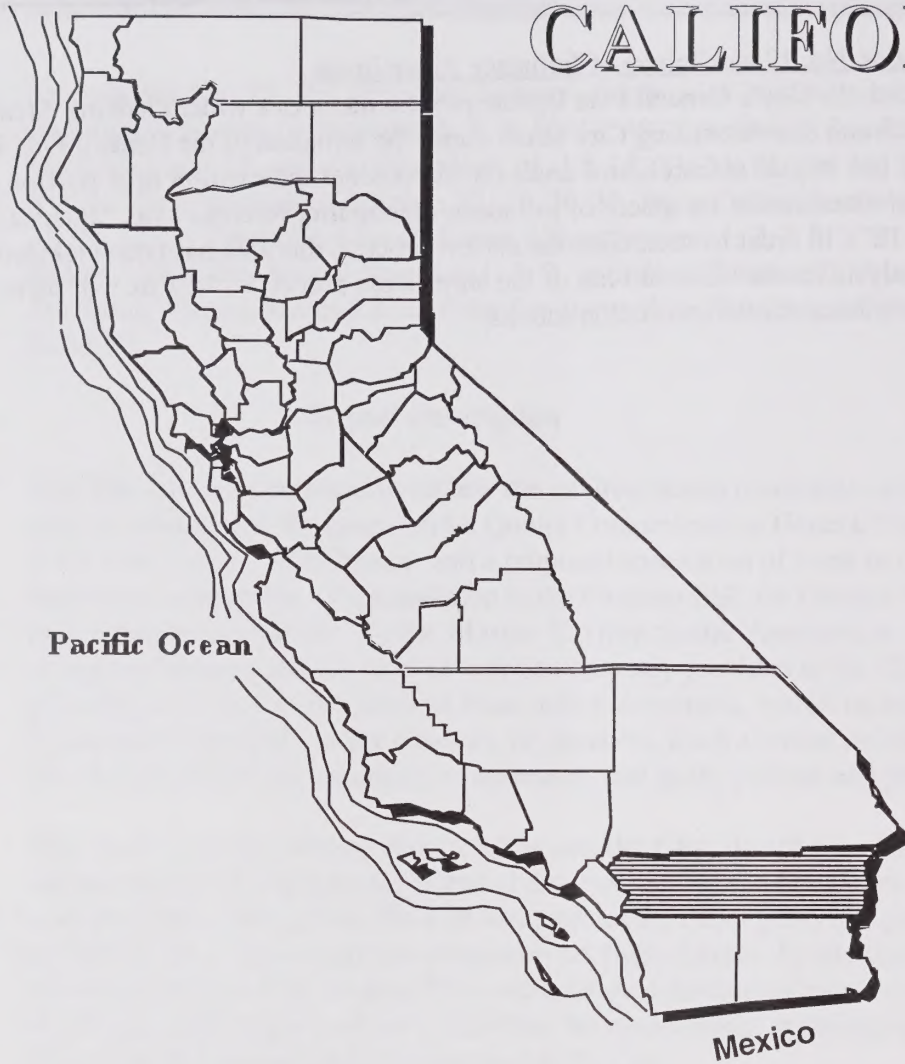
The General Plan study area includes approximately 31± square miles of incorporated City lands, with about 2.7± square miles of sphere-of-influence lands, and about 49± square miles outside the sphere in the planning area. Over the past year, City staff, the Planning Commission and City Council have held numerous meetings to discuss overall and specific goals for the community, as well as policies and programs to be included in the Comprehensive General Plan. A detailed assessment of existing land use designations was conducted, and a new set of land use designations was considered in various portions of the City. Modifications to the circulation system were also considered to address current and projected traffic volumes on major roadways.

Proposed Annexation No. 12 and Sphere of Influence Amendment

As previously stated, the City's General Plan Update process includes a wider Planning Area which extends to the north and east of existing City limits. Since the initiation of the General Plan Update process, the City has begun research and analysis to consider annexation of a portion of the Planning Area and extension of its sphere of influence (hereinafter referred to as "annexation" or "Annexation No. 12"). In order to streamline the review process, this area has been included in the environmental analysis for the General Plan. If the annexation proceeds, the EIR will serve as the environmental compliance for the annexation actions.



CALIFORNIA

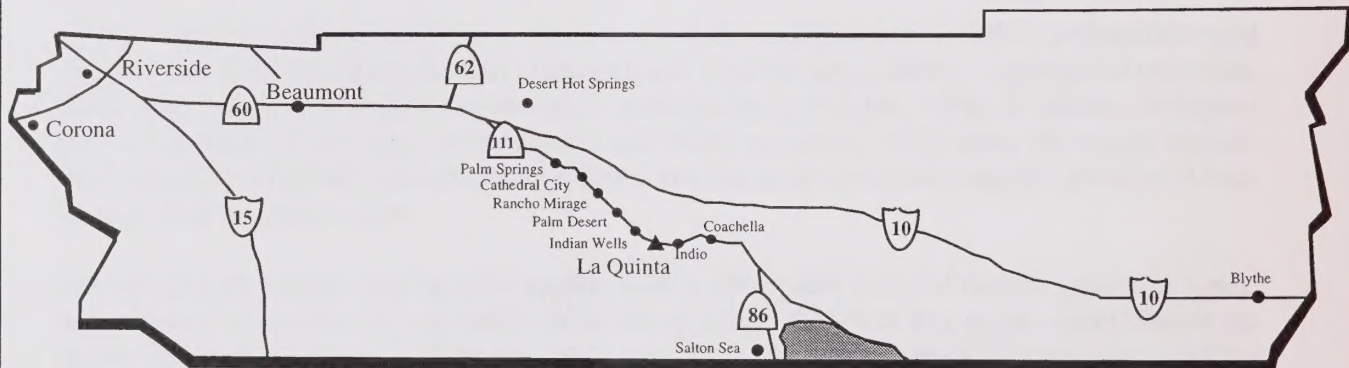


Pacific Ocean

Mexico



No Scale



RIVERSIDE COUNTY



TERRA NOVA[®]
Planning & Research, Inc.

**City of La Quinta
Regional Location Map**



Exhibit

I-1

Exhibit I-2 City of La Quinta General Plan

LEGEND

Roads

Township/Range Sections

Railroads

City Limits

General Plan Planning Area

City Sphere of Influence

Scale
1:90,000

0 6,250 12,500 18,750
Feet



Riverside County Vicinity Map



Map Prepared on: July 10, 2000

Map Prepared by: Aerial Information Systems

Map Version No.: 5

TERRA NOVA
Planning & Research, Inc.

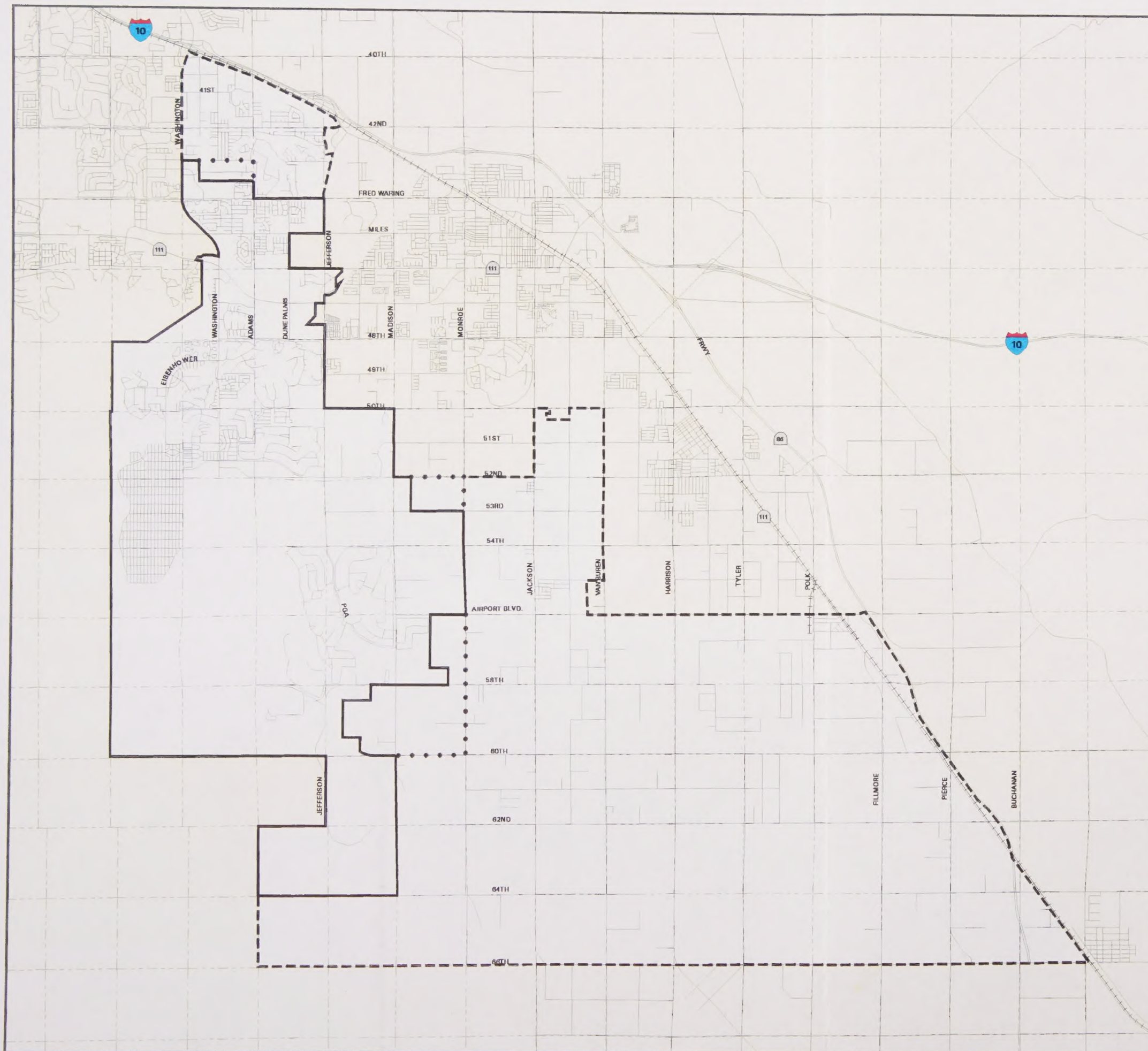
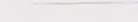
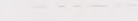
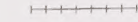
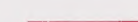
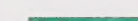




Exhibit I-3 City of La Quinta General Plan

LEGEND

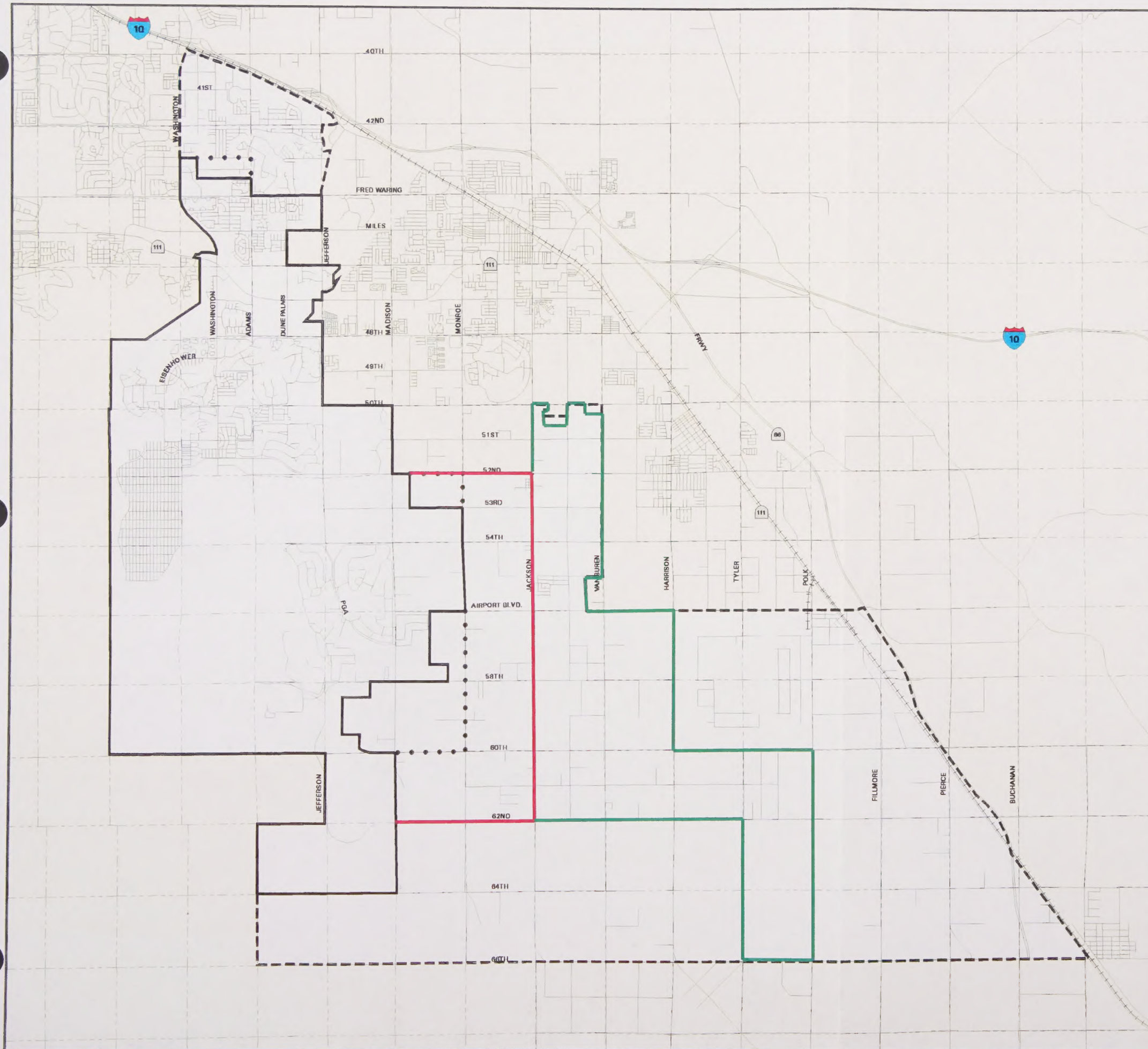
-  Roads
-  Township/Range Sections
-  Railroads
-  City Limits
-  General Plan Planning Area
-  City Sphere of Influence
-  Annexation Area
-  Sphere of Influence Amendment Area



Riverside County Vicinity Map



Map Prepared on: July 10, 2000
Map Prepared by: Aerial Information Systems
Map Version No.: 5





Existing Land Uses

Within the City limits, development is constrained and influenced by the topography of the Santa Rosa and Coral Reef Mountains, and generally occurs north of 52nd Avenue and east of Jefferson Street. The exception is the Cove community, which occurs on an alluvial plain bounded on the west and south by the Santa Rosa Mountains, and on the east by the Coral Reef Mountains.

The General Plan planning area consists of a total of 53,498± acres, including 20,254± acres in the City limits, and 33,244± acres in the sphere-of-influence and lands outside the sphere and within the planning area. Approximately 61% (32,897 acres) of the planning area is currently developed. Of developed lands, about 75% (24,898 acres) are in residential uses, which are dominated by low density, single family units in the City limits and very low density agricultural uses in the remainder of the planning area. Of the City's total housing stock, approximately 92% (11,197 units) are attached and detached single-family units, 6% (697 units) are multi-family units, and the remaining 2% (247 units) are mobile homes.

Commercial lands provide a wide range of retail services, including neighborhood and community-scale retail, tourist commercial, office and mixed use commercial facilities. Of all the lands in the planning area, commercial land uses represent about 3% (1,624 acres). Major community facilities represent about 0.5% (218 acres). Parks, golf courses, and watercourse/flood control facilities comprise about 10% (4,502 acres) of lands. Industrial designations accommodate a variety of light and heavy industrial activities, including manufacturing, warehousing and distribution operations. Industrial uses comprise approximately 3% (1,360 acres) of all lands, none of which occur within the City limits. Airport uses account for 4% (2,184 acres) of all lands, and include the Bermuda Dunes and Desert Resorts Airports.

Surrounding Land Uses

Surrounding land uses are under the jurisdiction of Riverside County and four cities: Palm Desert, Indian Wells, Coachella, and Indio. Riverside County lands border the planning area to the north and are designated for low and medium density residential uses, with limited commercial lands at the I-10/Washington Street and I-10/Jefferson Street interchanges.¹

Lands to the southwest are also under the jurisdiction of Riverside County. These lands occur within the Santa Rosa Mountains and are assigned Open Space designations, including Wildlife/Vegetation and Mountainous Areas. South of the planning area, Riverside County lands are primarily designated for Agriculture, with the exception of limited commercial, manufacturing and low density residential uses in the Valerie Jean community south of Avenue 66.² Lands adjacent to the foothills in this area are designated as Planned Residential Reserve (0-5 du/ac).

Lands west of the planning area, generally north of Fred Waring Drive and west of Washington Street, are under the jurisdiction of the City of Palm Desert. The majority of these lands are designated for low-density (3-5 du/ac) residential, with limited high density (7-18 du/ac) residential

¹ "Western Coachella Valley Plan," County of Riverside, adopted December 31, 1985, amended through August 30, 1994.

² "Eastern Coachella Valley Plan," County of Riverside, adopted July 2, 1985, amended through December 27, 1994.

**Table I-1
Statistical Summary of Land Uses
General Plan Recommended Alternative**

Land Use Category	City of La Quinta		Sphere/Planning Area	
	Acres	%	Acres	%
VLDR Very Low Density Resid. (0-2 du/ac.)	495	2.4%	6,594	19.8%
LDR Low Density Residential (2-4 du/ac.)	6,014	29.7%	16,691	50.2%
MDR Medium Density Resid. (4-8 du/ac.)	1,282	6.3%	1,031	3.1%
MHDR Medium-High Dens Res. (8-12 du/ac.)	98	0.5%	465	1.4%
HDR High Density Residential (12-16 du/ac.)	94	0.5%	188	0.6%
Residential Subtotal	7,983	39.4%	24,969	75.1%
M/RC Mixed Commercial	397	2.0%	124	0.4%
CC Community Commercial	145	0.7%	338	1.0%
NC Neighborhood Commercial	112	0.6%	92	0.3%
CP Commercial Park	64	0.3%	0	0.0%
O Office	40	0.2%	44	0.1%
TC Tourist Commercial	507	2.5%	0	0.0%
VC Village Commercial	102	0.5%	31	0.1%
Commercial Subtotal	1,367	6.8%	629	1.9%
I Industrial	0	0%	1,947	5.8%
MC Major Community Facility	192	0.9%	107	0.3%
AP Airport	0	0.0%	2,184	6.6%
Public/Quasi-Public Subtotal	192	0.9%	2,291	6.9%
P Park Facilities	717	3.5%	204	0.6%
OS Open Space	5,450	26.9%	2,452	7.4%
G Golf Course	3,943	19.5%	752	2.3%
W Watercourse	602	3.0%	0	0.0%
Open Space Subtotal	10,712	52.9%	3,408	10.3%
Total	20,254	100%	33,244	100%

**Table I-2
Recommended Alternative
Land Use Buildout Statistical Summary**

Land Use	Total Acres	Dev. Acres	Vacant Acres	Existing Units	Potential Units ¹	Bldout Units
VLDR Very Low Dens. (0-2 du/ac)	7,089	5,526	1,563		2,344	
LDR Low Dens. (2-4 du/ac)	22,705	3,682	19,023	11,197*	57,069	73,976
MDR Medium Dens. (4-8 du/ac)	2,313	1,752	561		3,366	
MHDR Medium-High Dens (8-12 du/ac)	562	350	212	944**	1,908	4,976
HDR High Dens. (12-16 du/ac)	282	105	177		2,124	
Residential Subtotal	32,951	11,415	21,536	12,141	66,811	78,952
	Total Acres	Dev. Acres	Vacant Acres	Existing Sq.Ft. ²	Future Sq.Ft. ²	Total Sq.Ft. ²
M/RC Mixed Commercial	520	197	323	1,887,890	3,095,374	4,983,264
CC Community Commercial	484	288	196	2,759,962	1,878,307	4,638,269
NC Neighborhood Commercial	204	137	67	1,312,898	642,074	1,954,972
CP Commercial Park	64	0	64	0	613,325	613,325
O Office 84	44	40	421,661	383,328	804,989	
TC Tourist Commercial	507	328	179	3,143,290	1,715,393	4,858,683
VC Village Commercial	134	90	44	862,488	421,661	1,284,149
Commercial Subtotal	1,997	1,084	913	10,388,189	8,749,462	19,137,651
I Industrial	1,947	1,199	748	17,757,670	11,078,179	28,835,849
MC Major Community Facility	299	239	60	---	---	---
AP Airport	2,184	560	1,624	---	---	---
Public/Quasi-Public Subtotal	2,483	799	1,684	---	---	---
P Park Facilities	922	795	127	---	---	---
OS Open Space	7,902	1,713	6,189	---	---	---
G Golf Course	4,694	3,624	1,070	---	---	---
W Watercourse	602	469	133	---	---	---
Open Space Subtotal	14,120	6,601	7,519	---	---	---
Total	53,498	21,098	32,400	---	---	---

* Includes attached and detached single family housing units, as categorized by CA Dept. of Finance, 2000.

** Includes multi-family housing units from two to five-plus and mobilehomes, as categorized by CA Dept. of Finance.

¹ Assumes 75% of the total number of units possible, at maximum permitted density.

² Assumes 22% lot coverage for commercial development, and 34% lot coverage for industrial development.

Table I-3
City of La Quinta Draft General Plan
Proposed Land Use Designations

Land Use Designations (Density)	Purpose of Land Use
RESIDENTIAL LAND USES	
Very Low Density Residential, VLDR (Up to 2 dwelling units per acre)	This designation provides for large lot single family residential development at the southeastern boundary of the City, and in the southeastern-most portions of the planning area. The designation provides a transition between agricultural lands and more intense residential uses. It encourages large lot subdivisions, and promotes the progression of land uses.
Low Density Residential, LDR (Up to 4 dwelling units per acre)	This land use designation is the most prevalent in the City and the planning area. It supports the development of single family attached and detached development, both in a country club setting and in standard subdivisions. The clustering of smaller housing units, including condominiums and townhomes, may be appropriate in this designation, with the provision of common area amenities and open space, when governed by a Specific Plan.
Medium Density Residential, MDR (Up to 8 dwelling units per acre)	This designation allows for the development of single family attached and detached units on smaller lots. The Cove area of the City falls under this designation. The clustering of smaller housing units, including condominiums and townhomes, may be appropriate in this designation, with the provision of common area amenities and open space, when governed by a Specific Plan.
Medium-High Density Resid., MHDR (Up to 12 dwelling units per acre)	This designation is appropriate for both single and multiple family dwelling units, including attached and detached units on small lots, condominiums, townhomes and apartments. The clustering of smaller housing units, including condominiums, townhomes and apartments, is appropriate in this designation, with the provision

High Density Residential, HDR
(Up to 16 dwelling units per acre)

of common area amenities and open space. Mobile home parks or subdivisions with common area amenities and open space may also be allowed with the approval of a Conditional Use Permit under this designation.

This designation allows for attached single and multi-family dwellings. This designation is also most suitable for planning communities and affordable and senior housing where smaller units and higher densities may be appropriate. Duplex and multiplex development is the most common. Mobile home parks or subdivisions with common area amenities and open space may also be allowed with the approval of a Conditional Use Permit under this designation.

Agricultural Overlay

This overlay has been applied to underlying residential designations in the southern planning area. It recognizes the importance of the agricultural community in this part of the Coachella Valley, and demonstrates the City's commitment to maintaining existing agricultural land uses. Any agricultural land use within this overlay area shall be allowed to continue until such time as the land owner chooses to develop. Agricultural land uses within this overlay area can continue as they occur at the time this General Plan is adopted.

COMMERCIAL LAND USES

Mixed Regional Commercial, M/RC

This land use designation supports major commercial land uses along the Highway 111 corridor, on parcels of 20 acres or more. These land uses serve not only the City, but neighboring jurisdictions as well. Land uses typical of this designation include corporate offices, non-laboratory research and development facilities, major department and specialty stores, supermarkets and drug stores, medical offices, hospitals and clinics, hotels and motels, automobile sales, and commercial recreational and entertainment facilities. Smaller commercial retail

facilities which support and are complementary to the primary land uses in this category are also permitted. These would include, but not be limited to restaurants, services and some automobile service related land uses. High density residential land uses are permitted only if they are more than 600 feet from Highway 111. A Specific Plan is required for all lands under this designation.

Community Commercial, CC

This designation provides for larger, community-scale shopping centers on parcels ranging from 20 to 30 acres in size, along major arterial roadways. These centers include large scale anchors, as well as variety of retail outlets and restaurant and entertainment uses to meet the needs of multiple neighborhoods. Other typical land uses include general merchandise, hardware, food and drug stores, offices and personal services. Hotels and motels may also be appropriate within this designation.

Neighborhood Commercial, NC

This designation supports the development of commercial land uses which serve the daily needs of the adjacent neighborhood on parcels of 10 to 20 acres. Typical land uses include food and drug stores, personal services, small restaurants and financial institutions. This designation generally occurs at arterial and major arterial intersections.

Commercial Park, CP

The typical land uses under this designation are office and light industrial: warehousing and storage, office/warehouse combined uses, high technology, light manufacturing and automobile repair.

Office, O

This designation allows for the development of professional and general offices, including financial, medical and legal offices. Retail commercial uses which support these offices may also be appropriate under this designation, but shall not be the principal use.

Resort Mixed Use, RMU

This land use designation is intended for projects which propose a wide range of potential land uses. A minimum of 80 acres is required for any project in this land use designation. Single and multi-family residential units, and condominium

development are permitted in this designation, as are golf courses and land uses permitted in the Tourist Commercial designation. Timeshares, recreational vehicle parks and resorts, and mobile home parks and subdivisions may be permitted with a Conditional Use Permit.

Tourist Commercial, TC

Uses allowed under this designation are limited to resort hotels, tourist commercial and recreational land uses, such as destination hotels, conference centers and hotels, restaurants and ancillary retail land uses. Time share projects may also be appropriate under this designation with the approval of a Conditional Use Permit. A Specific Plan is required in the Tourist Commercial designation.

Village Commercial, VC

The intent of this designation is to provide for small scale, pedestrian-oriented specialty retail stores, which help create a village atmosphere. Typical land uses include art galleries, restaurants and cafes, apparel and jewelry stores and services. Medium High Density and High Density residential land uses may also be appropriate under this designation.

INDUSTRIAL LAND USES

Industrial, I

This land use designation is applied to lands in the planning area. It provides for business parks and the development of non-polluting industrial uses operating entirely in enclosed buildings, and those requiring limited and screened outdoor storage. Examples include clean manufacturing operations, aircraft or airport related uses, warehousing and distribution facilities, mini-warehouse storage, and a variety of light manufacturing businesses. Siting industrial lands in close proximity to major regional highway and railroad facilities is also desirable. Preferred development includes master planned business and industrial parks with integrated access and internal circulation.

PUBLIC/QUASI-PUBLIC USES

Major Community Facilities, MC

This designation is applied to existing or planned municipal, educational or public service facilities. Typical land uses within this designation include civic centers and other governmental offices, fire stations, schools and substations.

Airport, AP

Designated the Bermuda Dunes and Thermal airport areas.

OPEN SPACE

Park, P

This designation is applied to existing municipal and regional park facilities.

Floating Park Designation, P

In the southern planning area, this floating designation is not assigned to a specific parcel, but indicates that a park or parks will be located in the general area in the future.

Open Space, OS

This designation applies to lands in public or quasi-public ownership in the hillsides of the City and planning area. The designation allows the discretionary approval of trails, trailheads and similar facilities.

Hillside Overlay

This overlay is applied to lands above the toe of slope. The provisions of the Hillside Preservation Ordinance shall apply.

Golf Course, G

Public and private golf courses, and associated ancillary facilities.

Watercourse/Flood Control, W

Floodways and drainage channels.

**Table I-4
Annexation No. 12
Land Use Buildout Statistical Summary**

Recommended General Plan Land Use Designation	Total Developed Acres	Vacant Acres	Existing Units	Potential Units¹	Bldout Units
LDR Low Density (2-4 du/ac)	580.62	357.99	222.63	667	
LDR Low Density w/Ag. Overlay	3,279.62	2,700.22	579.40	232*	9,238
MDR Med. Density (4-8 du/ac)	323.47	194.15	129.32	775	
MHDR Med-High Dens (8-12 du/ac)	464.80	336.34	128.46	0**	1,156
HDR High Density (12-16 du/ac)	20.33	7.18	13.16	157	
Residential Subtotal	4,668.84	3,595.88	1,072.97	232	11,993
	Total Developed Acres	Vacant Acres	Existing SqFt²	Future SqFt²	Bldout SqFt²
NC Neighborhood Commercial	58.89	56.43	2.45	540,780	23,479
M/RC Mixed Regional Commercial	39.91	39.91	0	382,465	0
Commercial Subtotal	98.80	96.34	2.45	923,245	23,479
MC Major Community Facilities	42.43	31.72	10.71	—	—
G Golf Course Open Space	555.33	428.87	126.46	—	—
OS Open Space	44.50	0	44.50	—	—
P Park Facilities	10.01	7.18	2.83	—	—
Open Space Subtotal	609.84	436.05	173.79	--	--
Total	5,419.91	4,159.98	1,259.93	--	--

* Includes attached and detached single-family units, as derived from 2000 U.S. Census data. Also assumes that 2,500 of the acreage currently in agriculture will develop as low density residential.

** Includes multi-family housing units.

1 Assumes 75% of the total number of units possible, at maximum densities permitted.

2 Assumes 22% lot coverage at buildout.

Source: Aerial Information Systems, April 2001; estimates by Terra Nova Planning & Research

**Table I-5
Sphere of Influence Amendment
Land Use Buildout Statistical Summary**

Recommended General Plan Land Use Designation	Total Developed Acres	Total Developed Acres	Vacant Acres	Existing Units	Potential Units¹	Bldout Units
VLDR Very Low/Ag Overlay(0-2du/ac)	68.45	67.48	0.97		1	
LDR Low Density (2-4 du/ac)	429.61	218.63	210.98		632	
LDR Low Density w/Ag. Overlay	5,650.63	5,011.00	639.63	837*	16,318	18,389*
MDR Med. Density (4-8 du/ac)	459.08	358.81	100.27		601	
HDR High Density (12-16 du/ac)	164.85	93.67	71.18	0**	854	854**
Residential Subtotal	6,772.62	5,749.59	1,023.03	837	18,406	19,243
	Total Developed Acres	Total Developed Acres	Vacant Acres	Existing SqFt²	Future SqFt²	Bldout SqFt²
CC Community Commercial	244.14	211.81	32.33	2,029,817	309,824	2,339,64
M/RC Mixed Regional Commercial	83.40	69.12	14.28	662,391	136,848	799,239
O Commercial Office	43.72	43.72	0	418,977	0	418,977
Commercial Subtotal	371.26	324.65	46.61	3,111,185	446,672	3,557,857
Industrial	383.55	323.08	60.47	4,784,944	895,584	5,680,528
MC Major Community Facilities	36.67	0	36.67	—	—	—
OS Open Space	640.95	492.91	148.04	—	—	—
Total	8,205.04	6,890.24	1,314.80	--	--	--

* Includes attached and detached single-family units, as derived from 2000 U.S. Census data. Also assumes that at buildout, 4,800 of the acreage currently in agriculture would develop as low density residential.

** Includes multi-family housing units.

1 Assumes 75% of the total number of units possible, at maximum densities permitted.

2 Assumes 22% lot coverage for commercial development, and 34% lot coverage for industrial.

Source: Aerial Information Systems, April 2001; estimates by Terra Nova Planning & Research

Residential Land Uses

The Recommended Alternative provides for a total of 32,952± acres of residential land, which represents a decrease of about 2,802 acres, or 8.5% less than the current General Plan. Currently, there are approximately 12,141 dwelling units within the incorporated city limits. Analysis of existing development in the planning area indicates that development has not occurred at the

maximum densities permitted. Therefore, for the purposes of projecting future buildout units, it has been presumed that residential development will occur at 75% of the maximum densities permitted. The proposed Plan provides for about 21,536 acres of vacant residential lands. At 75% of the maximum densities permitted, the lands could accommodate an additional 66,811 dwelling units.

Buildout of the proposed General Plan is expected to result in a total of 78,952 dwelling units, including existing and potential units. This represents an increase of about 41,923 dwelling units, or about 113%, over the number of units provided under the current General Plan. It is important to note, the substantial increase occurring within vacant residential acreage is due to the conversion of developed agricultural land to vacant low density residential lands, which is anticipated for the long term.

Commercial Land Uses

The proposed commercial designations and permitted uses are essentially the same as those used in the current General Plan. Under the current General Plan, there are 1,624± acres designated for commercial development in the planning area. The Recommended Alternative provides for a total of 1,996.4 acres, which represents an increase of 373 acres, or a 23% increase over the current General Plan. Commercial lands are located primarily along the Highway 111 corridor, Washington Street, Eisenhower Drive, and Harrison Street near the Desert Resorts Airport. The proposed Plan also provides for Tourist Commercial development at a number of other scattered locations, particularly those associated with existing and planned residential resort communities in the southeasterly portion of the City.

Industrial Land Uses

Approximately 1,360 acres in the planning area are designated for industrial development under the current General Plans. The proposed Plan provides for a total of 1,947± acres of industrial development, which accounts for 587± more acres than are provided under the current General Plans, or an increase of about 43%. Under the proposed Plan, these additional industrial acres are located at the extreme eastern edge of the planning area, east of Highway 111 near Thermal.

Under the current General Plan, there are no industrial lands located within the City limits, but there are four industrial land use categories assigned to Riverside County lands. The proposed Plan introduces a single industrial category, which provides for a variety of industrial uses in the planning area, including business parks, light manufacturing operations, and warehousing and distribution facilities.

Open Space Land Uses

Open Space land use designations are assigned to those lands which constitute an important or valuable natural resource and warrant protection. These include parks, golf courses, watercourses and floodways and mountainous areas. In the Recommended Alternative Land Use Map, Open Space lands are generally concentrated within the foothills of the Santa Rosa and Coral Reef Mountains. Substantial open spaces also occur within the Lake Cahuilla County Park, Fish Traps Park, the Coachella Valley Stormwater Channel, and numerous golf courses within planned resort residential communities. Like the current General Plan, the proposed Plan applies a Hillside Overlay to lands occurring above the toe of slope of the Santa Rosa and Coral Reef Mountains.

Development in these areas may occur, but only when in strict conformance with the City's Hillside Conservation Zone Ordinance. Application of the Hillside Overlay will contribute to the preservation of the mountains and will help limit potential impacts associated with continued urbanization.

Open Space land use designations and acreages are provided in the following table. The proposed General Plan provides for approximately 14,120 acres of Open Space, which represents an increase of 1,763± acres (14%) over the current Plans. These additional Open Space lands are generally located in the approved, but yet undeveloped golf course resort developments, which are not designated as Open Space in the current General Plans.

Proposed Annexation No. 12

The City is considering annexation of a portion of the General Plan planning area and extension of its sphere of influence. In order to streamline the environmental review process, analysis of these areas is included in this General Plan EIR. If the annexation proceeds, this EIR will serve as the environmental compliance document for subsequent annexation actions.

As illustrated in Exhibit I-3, the proposed annexation area is located in the southeasterly portion of the planning area and is generally bounded by 52nd Avenue on the north, 62nd Avenue on the south, Jackson Street on the east, and the existing city limits on the west. The annexation area totals approximately 5,420 acres and currently contains primarily vacant desert lands and large lot residential development, including ranches, a residential subdivision surrounding a golf course, and other scattered residential development. Approximately 4,160 acres (77%) in the proposed annexation area are developed, while the remaining 1,260 acres (23%) are vacant. According to the 2000 U.S. Census, the population of the annexation area is approximately 639 residents. Assuming an average household size of 2.75 persons per household, the annexation area currently contains an estimated 232 dwelling units, all of which are presumed to be single-family units.

Approximately 70% of the annexation area (3,782 acres) is currently designated for Agriculture and Very Low Density Residential (3A and 3B), with a maximum density of 2 dwelling units per acre, in the existing Riverside County General Plan. The remainder of the annexation area is assigned a mix of land use designations, including low to high density residential, golf course open space, mixed commercial, park facilities, and major community facilities. Two school sites and a park, totaling 40 acres and 10 acres, respectively, are located within the proposed annexation area. The Coral Mountain Specific Plan project is located in the southwestern corner of the annexation area. This project has been approved by Riverside County for medium to high density (8 to 12 units per acre) residential, golf course, and limited commercial development, but is not yet developed.

The City proposes to designate approximately 60% of the annexation area (3,280 acres) for Low Density Residential development with an Agricultural Overlay. Within this designation, land may be developed at a maximum density of 4 dwelling units per acre, and all existing agricultural land uses may continue until such time as the landowner chooses to develop. Under the proposed land use plan, approximately 11% of the annexation area is designated for Low Density Residential development (without an Agricultural Overlay); 10% is designated for Golf Course Open Space; 9% is designated for Medium High Density Residential; and 6% is designated for Medium Density

Residential. The remaining 4% of the annexation area is designated for a mix of commercial uses, major community facilities, open space and park facilities.

The annexation area also contains 2.45 acres of vacant Neighborhood Commercial land. Assuming 22% lot coverage at buildout, these lands could accommodate approximately 23,478 square feet of new commercial development. When combined with existing square footage, buildout of the annexation area could result in a total of about 946,724 square feet of commercial development. These estimates are part of the development described in Tables III-2 and III-3, which estimate future buildout levels in the entire General Plan planning area.

Other vacant acres in the annexation area designated for a wide range of uses and are not expected to result in the development of substantial square footage. The annexation area contains 10.71 acres of vacant land designated for Major Community Facilities. These lands can accommodate a wide range of public service facilities, such as civic centers, schools, fire stations, and electrical substations. Other vacant acres in the annexation area are designated for Golf Course Open Space, Open Space, and Park Facilities, and any structures developed on these sites are expected to be limited to golf courses, clubhouses and recreational facilities.

Proposed Sphere of Influence Amendment

The proposed sphere of influence (SOI) amendment area consists of approximately 8,205 acres bounded by Avenue 50 on the north, Jackson Street on the west, Avenues 62 and 66 on the south, and Polk, Harrison and Van Buren Streets on the east. The proposed sphere of influence area is depicted in Exhibit I-3.

Land within the proposed SOI is currently under the jurisdiction of Riverside County and is primarily designated for Agriculture, with the exception of small pockets of land designated for residential (3A and 2B) development in the northernmost portion of the area. Small areas of Commercial and Manufacturing designated lands are also part of the SOI amendment area, as is the Kohl Ranch Specific Plan in the southeastern corner. The Kohl Ranch Specific Plan has been approved by Riverside County, but has not yet been developed. It includes lands designated for low, medium, and high-density development, as well as commercial, industrial, and open space land uses. According to the 2000 U.S. Census, the SOI amendment area contains a population of approximately 2,304 residents. With an average household size of 2.75 persons per household, there are an estimated 837 existing dwelling units in the SOI amendment area, all of which are presumed to be single-family units.

The SOI amendment would be an administrative action that would provide the City with a greater degree of involvement in urban development occurring within the SOI. Lands within the SOI would remain under the jurisdiction of Riverside County, and the existing land use designations assigned by the Riverside County General Plan would remain in effect. The County would be responsible for notifying the City of La Quinta of pending development cases, so that the City could stay abreast of development trends and issues in the SOI.

If the SOI area is annexed into the City, the above described land use designations would be implemented. The proposed SOI contains approximately 1,023 vacant acres designated for

residential development under the proposed land use plan. In addition, it is assumed that the majority of those lands currently in agriculture would be converted to low density residential land uses. Buildout of the area would be expected to result in the development of approximately 16,318 new dwelling units. This assumes that all residential lands would develop at a rate of 75% of the maximum densities permitted. When combined with the number of existing dwelling units in the SOI amendment area, this yields approximately 19,243 dwelling units at area buildout.

The SOI amendment area also contains vacant lands designated for commercial development under the proposed land use plan. Approximately 32 vacant acres and 14 vacant acres are designated for Community Commercial and Mixed Regional Commercial uses, respectively. Assuming 22% lot coverage for commercial lands at buildout, the SOI area could accommodate a total of about 3,557,857 square feet of commercial development. The SOI amendment area also includes about 60 vacant acres designated for Industrial development. Assuming 34% lot coverage for industrial lands at buildout, the SOI area could accommodate approximately 5,680,528 square feet of industrial development. These buildout estimates are included in Tables III-2, III-3, and III-4, which describe future buildout levels in the entire General Plan planning area.

The SOI amendment area also includes vacant acres designated for Major Community Facilities and Open Space under the proposed land use plan. Because the Major Community Facilities designation permits the development of a wide range of public facilities, it is difficult to anticipate how these lands will be developed in the future, and what, if any buildings will be constructed on them. Lands designated for Open Space will remain undeveloped.

Buildout of the sphere of influence amendment area is not expected to result in significant land use incompatibilities, but noise, odor, visual and other incompatibilities may occur where agricultural and urban lands are adjacent to one another. These issues are evaluated in Section III-B, which specifically addresses Agricultural Resources in the planning area. Other potential impacts are addressed throughout Section III of this EIR.

Potential Impacts Addressed

A wide range of environmental issues associated with the implementation of the La Quinta General Plan are assessed throughout the EIR. These include, but are not limited to, land use compatibility, agricultural resources, traffic and circulation, flooding and drainage, geotechnical and seismic safety, air quality, biological and archaeological resources, noise impacts and visual resources. Other areas of concern include the availability of public services and facilities, and the socio-economic impacts associated with General Plan implementation.

A brief summary of potential impacts in several issue areas discussed in detail in Section III of this EIR is provided below.

Agricultural Resources

Under the existing Riverside County General Plan, approximately 19,938 acres are designated for agricultural land uses. Under the Recommended General Plan, a total of 17,615 acres are included in the Agricultural Overlay. There are currently a total of 5,411.99 acres of land under Williamson Act contracts within the planning area.

Under the Recommended General Plan, approximately 6,280 acres are designated for Very Low Density Residential (VLDR) development with an Agricultural Overlay. This designation provides for large lot single-family development, with densities up to 2 dwelling units per acre. The Agricultural Overlay provides for the continuation of existing agricultural activity at the discretion of the landowner.

The Recommended General Plan designates approximately 11,335 acres for Low Density Residential (LDR) development with an Agricultural Overlay. This designation is the most prevalent in the easterly portion of the planning area and is applied to lands generally south of Airport Boulevard, between Monroe and Tyler Streets. It supports the development of single-family attached and detached residences, with densities up to 4 units per acre. The Agricultural Overlay allows existing agricultural operations to continue, until such time as the landowner chooses to develop.

Implementation of the Recommended Land Use Plan and Annexation No. 12 could result in the conversion of prime farmland and farmland of statewide importance to urban land uses, and could result in the cancellation of Williamson Act contracts on lands in the easterly portion of the planning area.

A detailed discussion of potential impacts to agricultural resources is provided in Section III of this EIR.

Traffic and Circulation

Based on the land use pattern established by the Recommended Alternative, buildout of the planning area is expected to generate approximately 1,200,150 daily trip-ends.⁵ Daily traffic volume projections expected upon buildout of the Recommended Alternative are illustrated in Exhibit III-6.

Based on the proposed land use patterns established by the Recommended General Plan, buildout of the annexation area and of the SOI amendment area is expected to result in level of service D or better within those areas, as depicted in Exhibit III-14, "Post 2020 Volume to Capacity Ratios for the Recommended Alternative".

The average daily trip volumes projected to result from buildout of the Recommended Land Use Alternative and projected background traffic are generally not expected to result in significant adverse impacts which cannot be addressed through the assignment of appropriate roadway classifications and planned roadway improvements.

A detailed discussion of potential impacts to traffic and circulation is provided in Section III of this EIR.

⁵ "City of La Quinta General Plan Update Traffic Study (Revised), La Quinta, California," RKJK & Associates, Inc., September 28, 2000.

Soils and Geology

Areas of the City and planning area that have a moderate to high susceptibility to rockfall and landslides are generally limited to the slopes of the Santa Rosa and Coral Reef Mountains, and development adjacent to them. Alluvial fan deposits shed from the Santa Rosa Mountains and blowing sand deposits in the northern planning area are vulnerable to collapse and/or hydrocompaction. When saturated, these soils could experience a rearrangement of their individual grains, resulting in a loss of cementation and damage to structures and foundations that are built upon them. Lacustrine deposits associated with ancient Lake Cahuilla contain relatively significant amounts of clay, and therefore could be moderately to highly expansive.

Subsidence in the Coachella Valley is closely associated with groundwater overdraft. A ground fissure resulting from subsidence has been documented in La Quinta in the past, and future ground fissures have the potential to occur throughout much of the City. Structures sensitive to slight changes in elevation, such as canals, sewers and drainage improvements are generally sensitive to the effects of subsidence and may be damaged if subsidence occurs.

The northern portion of the planning area is highly susceptible to wind erosion. Increased development and surface disruption resulting from grading and construction loosens soils and increases the amount of dust and other small particles in the air. The City currently requires the preparation of erosion control plans as part of the grading permit process, providing site-specific mitigation for this hazard with each development.

Although the planning area does not contain any known active or potentially active faults, it is located in close proximity to the San Andreas and San Jacinto Fault Zones, and is vulnerable to the effects of strong seismic groundshaking. Geologic analysis of the San Andreas Fault Zone indicates that these segments have a moderate probability (22 to 28%) of generating a moderate to large earthquake before year 2024. Earthquakes can cause substantial property damage, the loss of public services and facilities, and loss of life. Strong groundshaking can also trigger slope instability, liquefaction, settlement and flood inundation.

A detailed discussion of potential impacts associated with soils and geology is provided in Section III of this EIR.

Flooding and Hydrology

Overall, the adoption and implementation of the proposed General Plan is not expected to result in significant adverse hydrological impacts. The General Plan Land Use Plan establishes a development intensity that generally minimizes the creation of impermeable surfaces through relatively low densities and the encouragement of integrated Specific Plans, and through the use of on-site retention/detention basins and other development methods which effectively reduce stormwater runoff. Furthermore, the policies and programs established in the proposed Plan are expected to enhance inter-agency planning and cooperation, and facilitate the development of effective and cost-efficient local and regional drainage improvements.

A detailed discussion of potential impacts to flooding and hydrology is provided in Section III of this EIR.

Water Resources

Buildout of the proposed General Plan is expected to result in the development of approximately 66,811 new dwelling units. At the rate of 2.75 persons per household, General Plan buildout could generate an additional 183,730 residents within the planning area. When combined with the existing City population of 24,240 persons, the City's population at General Plan buildout could potentially reach 207,970 persons. This is a conservative, long-range estimate that assumes all residential lands within the planning area will develop at 75% of the maximum densities permitted.

Based on the CVWD water consumption factor of 550 gpd per capita, General Plan buildout could raise the city-wide total domestic water demand to approximately 114.3 million gallons per day, or about 350 acre-feet per day. This estimate includes water consumed by existing and future residents. Actual impacts may vary depending on the actual number of persons per household at buildout, and the level and type of landscaping and water-dependent amenities within each project. CVWD estimates that approximately 40% of domestic water consumed is reintroduced into the groundwater table through percolation, and is not lost. This includes a percentage of irrigation water applied to residential and other landscaping.

Impacts to water quality are expected to be comparable to, or slightly greater than those resulting from buildout of the current General Plan. While the proposed Plan facilitates more development, which could increase the potential for groundwater contamination, its policies and programs are directed at minimizing these risks and assuring the continued implementation of federal, state, local and other applicable pollution control standards.

A detailed discussion of potential impacts to water resources is provided in Section III of this EIR.

Biological Resources

The La Quinta General Plan planning area harbors lands which provide suitable habitat for a wide range of common and sensitive plant and animal species. Development facilitated by implementation of the proposed General Plan will result in both direct and indirect impacts to biological resources in the planning area.

The primary impacts are expected to be habitat loss, fragmentation and degradation. Additional impacts include the removal of breeding and foraging habitat, the removal of native vegetation and its inherent wildlife habitat value, and the associated loss of wildlife species. Where new landscaping is introduced, exotic and other non-native plants which may be potentially harmful to humans and animals may prevail. During site grading and construction, a number of native animal species will be displaced and/or eliminated. However, those species capable of adapting to human disturbance may be attracted to newly developed parcels.

A detailed discussion of potential impacts to biological resources is provided in Section III of this EIR.

Cultural Resources

Historically significant sites and structures are those that are 45 years of age or older and provide

evidence of past human activities. A high number of known archaeological and historic sites have been identified within the planning area. Mountainous slopes, canyons and alluvial fans, in particular, have been shown to contain ancient trails, rock cairns, and other signs of prehistoric occupation. Rolling sand dunes have been known to harbor evidence of Native American occupation associated with ancient Lake Cahuilla. Silty flat lands in the eastern planning area, which are now largely in active cultivation, contained more recent Native American and Euroamerican settlements.

It is likely that additional sites and structures may be discovered during future development. Future development projects could potentially result in direct and/or indirect disturbance or destruction of sensitive archaeological and historic resources.

A detailed discussion of potential impacts to cultural resources is provided in Section III of this EIR.

Air Quality

The impacts anticipated from buildout of the proposed General Plan will constitute an incremental increase in the air pollutants affecting the Coachella Valley and the City of La Quinta. Given that most of the City's electrical power is generated in air basins outside the Coachella Valley, projects occurring within the City limits will also contribute to cumulative air quality impacts in other regions.

It is important to note that the emissions will be spread over the long-term life of the General Plan, and will not be emitted during a single quarter or in any short-term or concentrated manner. It is expected that future vehicle emissions will become more efficient in the future, as new combustion technologies are introduced. However, the impact of new technologies is difficult to anticipate, and even projected future rates of emissions for vehicular traffic cannot be considered definitive.

A detailed discussion of potential impacts to air quality is provided in Section III of this EIR.

Noise

Noise impacts are expected to be primarily generated by increasing traffic volumes as the City proceeds to build out. The La Quinta Traffic Model was used to determine the future volumes projected on major roadways. The average posted speed limits and a percentage mix of light and heavy truck traffic along the roadways are included in the modeling data, as supplied by the City, CVAG, and traffic counts prepared for the General Plan Traffic Study.

The noise analysis found that the Recommended Alternative of the General Plan will result in unmitigated noise levels ranging from 61.3 to 73.3 dBA CNEL at 100 feet from centerline in the City and planning area. Depending on the adjacent land use, mitigation measures will be required to reduce the noise levels to an acceptable level. The General Plan includes a policy which requires that the City adhere to the noise standards established in Community Noise and Land Use Compatibility, Table 6.1 of the Master Environmental Assessment. This noise standards allows a standard of 65 dBA CNEL for exterior noise levels adjacent to sensitive receptors such as residences, hospitals and convalescent homes.

A detailed discussion of potential impacts associated with noise is provided in Section III of this EIR.

Visual Resources

Implementation of the proposed General Plan is expected to result in the continued development of a variety of residential, commercial and limited industrial structures, as well as golf courses and other resort developments. With the exception of hotels/motels and other specialty structures, development facilitated by the Plan is expected to continue to be limited to low and medium density, low elevation structures. A number of low density residential sites will be located within master planned communities and will benefit from consolidated open space, consistent architectural themes, and limited building heights.

Regardless of the type of development that occurs, new structures, signage, parking lots, utility infrastructure, lights and other elements of the built environment will result in additional visual impacts which could adversely affect surrounding viewsheds, either partially or wholly. Continued urbanization in undeveloped areas will change the topography and appearance of the valley floor from sandy substrate and alluvial fans with natural desert vegetation to a man-made built environment. New development, particularly that which occurs in the eastern portion of the planning area where development is limited and agricultural lands predominate, will create increased light and glare resulting from residential, commercial and industrial activities. Increased traffic will generate additional headlights and lighting levels on local roadways.

A detailed discussion of potential impacts to visual resources is provided in Section III of this EIR.

Public Services and Facilities

Buildout of the General Plan will result in increased demand for public services and facilities, including schools, libraries, emergency services, health care facilities, solid waste disposal, wastewater collection and treatment, domestic water service, and telephone, electric and natural gas utility services. The buildout of any project will be contingent on the service providers' ability to extend or provide services.

The new residential units, commercial and industrial square footage resulting from buildout of the General Plan can be quantified, and identified needs for public facilities delineated. A detailed discussion of potential impacts to public services and facilities is provided in Section III of this EIR.

Socio-Economic Resources

Buildout of the General Plan has the potential to generate revenues from a wide range of sources, most notably property, transient occupancy and sales taxes. Buildout will also generate additional costs for the provision of general government services and expanded infrastructure. The costs and revenues associated with buildout of the General Plan can be quantified, and cash flow estimates made. A detailed discussion of potential impacts on socio-economic resources is provided in Section III of this EIR.

E. Draft General Plan Goals and Policies

The General Plan is designed to provide City officials and the general public with information necessary to make informed decisions. Both the EIR and General Plan serve as the bases for subsequent planning activities, including the preparation of special environmental and planning studies. The following goals and policies set forth the basic parameters for the General Plan.

GENERAL LAND USE GOALS, POLICIES AND PROGRAMS

GOAL 1

Land use compatibility throughout the City and its planning area.

GOAL 2

High quality development which promotes the City's image as "The Gem of the Desert."

Policy 1

The City shall maintain a Land Use Map which implements the goals and policies of the Land Use Element and other elements of the General Plan.

Policy 2

The City Zoning Ordinance and Map shall be consistent with the General Plan land use designations.

Program 2.1

The City shall maintain a Zoning Ordinance that corresponds to the designations established in the Land Use Element, and which guides and regulates development consistent with the General Plan.

Program 2.2

The Zoning Ordinance shall include design standards in all zoning districts which assure high quality development.

Policy 3

The City shall continue to utilize planning tools as part of its overall economic development strategic plan.

Policy 4

Specific Plans of Land Use shall be required under the following circumstances:

- For all projects in the Commercial Park, Industrial, Tourist Commercial, Resort Mixed Use and Regional Commercial designations.
- For all projects proposing the integration of multiple land uses, including golf course, tourist commercial and residential uses.

- For all projects proposing flexible development standards differing from the City's Zoning Ordinance.

Program 4.1

The City shall maintain detailed requirements for the preparation of Specific Plans in its Zoning Ordinance.

Program 4.2

For approved Specific Plans, the Director of Community Development shall have the ability to determine substantial conformance in a Specific Plan, and waive the need for a Specific Plan amendment under the following circumstances:

- When changes in the land use allocation within the Specific Plan are less than 5%, and no new land use is proposed.
- When the off-site circulation pattern and turning movements will not be altered by the proposed change.
- When conditions, as defined in the California Environmental Quality Act, have not changed.

Policy 5

All land use development proposals shall be consistent with all applicable land use policies and standards contained in the General Plan.

Policy 6

In-fill development shall be encouraged by prioritizing capital improvements in the developed areas of the City.

Program 6.1

The City shall maintain maps and other information showing the location of all available infrastructure as provided by the utility companies.

Policy 7

The City shall maintain standards and procedures in its Zoning Ordinance which define the requirements for all development applications.

Policy 8

The City shall carefully consider annexations of its planning area to accommodate growth.

Program 8.1

All annexation applications by land owners shall be accompanied by required environmental and fiscal impact analyses to ensure the orderly development of the City.

Program 8.2

The City shall undertake a comprehensive community outreach program for any City-initiated annexation effort, to encourage and facilitate community participation in the annexation process.

Policy 9

Agricultural land uses in the planning area are encouraged.

CITY OF LA QUINTA

DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE COMPREHENSIVE GENERAL PLAN, ANNEXATION NO. 12 AND SPHERE OF INFLUENCE AMENDMENT

II. REGIONAL ENVIRONMENTAL SETTING

Introduction

This section of the EIR provides a general introduction to the environmental setting of the Coachella Valley, of which La Quinta is a part. Issues are discussed from a regional perspective to provide a broad and comprehensive understanding of the issues associated with implementation of the proposed General Plan. Topics discussed include existing and surrounding land use patterns in La Quinta, regional climate, topography, soils and geology, and biological resources. Also addressed are regional air quality issues, visual resources, traffic and circulation, cultural resources, and public services and facilities.

The City of La Quinta conducted an Initial Study in accordance with Sections 15063, 15064, and 15065 of the California Environmental Quality Act (CEQA) Guidelines (see Appendix A). Issues identified as potentially significant in the Initial Study are analyzed in detail in Section III of this document.

A. Existing Land Use

The City of La Quinta is located in the south central portion of the Coachella Valley in Riverside County. The current land use pattern in the City can be described as a low density residential community, which is bisected by State Highway 111. The most intense land uses generally occur along Highway 111 and Washington Street.

Residential lands comprise the largest land use category in the planning area. Existing residential development is predominantly low density detached and attached single family dwellings within standard subdivisions and country club development. The Cove area of the City represents the oldest residential development and occurs on smaller lots in a standard street grid. Some multi-family development has also occurred in the City, but it does not represent a significant percentage of residential development in the community. Residential land uses represent about 93% of all land

uses within the incorporated City limits, and 62% of land uses in the entire planning area. Further analysis shows that about 82% of the residential lands within the City occur at densities of 4 units to the acre or less. In the planning area, 71% of residential lands are in agriculture. All of the agriculturally designated lands are in the Thermal planning area. Medium and high density residential land use designations total about 3,158 acres in the entire planning area. These represent about 10% of all residential lands and 6% of all land uses.

Commercial lands accommodate a wide range of retail and other commercial services, ranging from offices to regional commercial facilities. There are 1,367± acres of commercially designated lands within the City limits, and 1,996± in the entire planning area. This represents 7% of all City lands, and 4% of lands within the entire planning area.

Industrial land uses range from warehousing to heavy industrial uses. There are approximately 1,947 acres of industrially designated lands within the planning area, the majority of which are adjacent to the Bermuda Dunes and Thermal airports. These represent about 4% of all lands within the planning area. There are currently no industrially designated lands within the City of La Quinta incorporated limits.

The balance of land uses in the planning area include public and quasi-public development, which represents approximately 298 acres, or 0.5% of all planning area lands. Other land use designations include Parks, with 921 acres (2% of all lands); Open Space, with 7,902 acres (15% of all lands); Golf Courses totalling 4,695 acres (9% of all lands); Watercourse, with 601 acres (1% of all lands); and Airports, totalling 2,184 acres (4% of all lands).

B. Surrounding Land Uses

A number of jurisdictions surround the City of La Quinta, including the cities of Palm Desert and Indian Wells to the west, the cities of Indio and Coachella on the east, and the County of Riverside to the north, east and south. Lands to the west are generally designated for residential and commercial land uses, as are lands north of the City. Lands in Indio to the east are primarily commercial, while lands in Coachella are both commercial and residential. Riverside County lands outside the planning area are primarily agricultural and open space in nature.

As a rule, lands to the west and north of the planning area are more urban, while lands to the east and south are more rural. This pattern can be expected to continue for the short to mid-term. The Riverside County General Plan is currently being revised, and new land use designations may vary from those currently assigned to the planning area and surrounding lands.

The City is generally bounded on the south and west by the steep slopes and foothills of the Santa Rosa Mountains, which form the southern boundary of the large Coachella Valley. The Coral Reef Mountains extend north from the Santa Rosas into the central portion of the City and physically constrain development in this area. Much of the land within the Santa Rosa Mountains is publicly owned, and is preserved as open space and targeted for conservation.

C. Agricultural Resources

In contrast to the urbanized City core, the easterly portion of the planning area is best characterized as a rural, agrarian region dominated by agricultural and open space lands, with scattered residential and commercial development. These lands are currently under the jurisdiction of Riverside County, and approximately 19,938 acres in this area are currently designated for agricultural land uses by the Riverside County General Plan. A substantial amount of these lands are classified as prime farmland or farmland of statewide importance by the County Agricultural Resources Map. The County currently maintains approximately 153 parcels with Williamson Act contracts¹ in the planning area, in an effort to preserve agricultural lands and protect them from urban encroachment. These contracts apply to a total of 5,411.99 in the planning area, including areas of Annexation No. 12 and the proposed sphere of influence (SOI) amendment.

Development trends over the few years, however, indicate that agricultural land in this region is being converted to urban development, and the agricultural-urban interface is gradually shifting further east. Recently constructed or approved urban projects in this area include golf courses surrounded by low and medium density single-family residential development, such as Coral Mountain and The Village at The Palms, and mixed-use developments like Kohl Ranch. These trends and the potential impacts of the Recommended General Plan on agricultural resources are discussed in more detail in Section III-B of this document.

D. Topography

Topography has and continues to play a major role in shaping the land use and circulation patterns in the Coachella Valley and the City of La Quinta. The Valley has been significantly affected by geologic uplift, weathering and erosion, and a variety of canyon drainages that have shaped and filled the valley floor. The Valley is characterized by extreme variation in topographic features, from a sub-sea geologic sink to mountain peaks rising two miles above sea level. The Salton Sea is located at the southeast end of the Valley and occurs at an elevation of about 228 feet below sea level. At the northwestern end of the Valley are the San Jacinto and San Bernardino Mountains, with peaks ranging from 9,600 to more than 11,000 feet above sea level. These mountains shield the valley from western maritime wind flows and focus prevailing winds through the narrow San Gorgonio Pass. This Sonoran desert environment is comprised of large and smaller scale alluvial fans and a valley floor with sand dunes and fields, and rocky, sandy washes that drain the surrounding mountains.

Topography within the General Plan planning area also varies significantly. Elevations range from a low of about 190 feet below sea level in the southeastern portion of the planning area, to a high of about 1,600 feet above sea level at the peak of the Coral Reef Mountains. The topography of the planning area provides a variety of development opportunities and constraints. Terrain in the Thermal portion of the planning area occurs at gently sloping lower elevations, and is well-suited for agricultural activity. Lands in the vicinity of the Coral Reef and Santa Rosa Mountains provide spectacular views, including the Cove residential area of the City, which occurs on a large alluvial fan.

¹ Riverside County Assessor's Office, Agricultural Division, April, 2001.

E. Climate

The climatic conditions of the Coachella Valley and City of La Quinta can be best characterized as a subtropical, low desert climate with high summer daytime temperatures, low rainfall, low relative humidity and cool nights. Maximum daytime temperatures can reach 125° Fahrenheit on the desert floor in summer, while winter nights can drop to sub-freezing temperatures. The planning area includes the slopes of the Santa Rosa and Coral Reef Mountains, which are generally cooler, with an approximate 5°F decrease for every 1,000 foot increase in elevation. In addition to relatively high temperatures and low precipitation, wind plays a significant role in shaping climate of the City and Coachella Valley.

The National Oceanic and Atmospheric Administration (NOAA) monitors regional rainfall through gauges located in Palm Springs and Indio. Thirty years of data indicate that mean annual rates of precipitation are approximately 3 inches in Indio and 5.33 inches in Palm Springs. Most precipitation occurs during the cooler months of November through March, but occasional high-intensity thunderstorms and tropical storms occur in late summer and early fall.

Due to its unique physiographic characteristics, the Coachella Valley is also highly susceptible to strong, sustained wind gusts. The extreme aridity of the region, and the draw effect which pulls cooler ocean-modified air masses through the San Geronimo Pass into the valley, generate strong winds which transport large quantities of sand. This natural sand migration and transport process can pose a significant risk to health and property. High wind conditions occur primarily in the spring months of April through June. The Bermuda Dunes area in the northern planning area is included within a "Blow-sand Hazard Area," as designated in the Riverside County Comprehensive General Plan.² Much of the southern planning area is effectively shielded from strong winds and wind erosion by the Santa Rosa Mountains.

F. Traffic/Circulation

Regional traffic in the Coachella Valley is accommodated by several major roadways, including U.S. Interstate-10, Highway 111, Highway 74, Highway 86 and Highway 62. Interstate-10 connects the Valley with the Los Angeles/Riverside/San Bernardino metropolitan areas to the west and the Phoenix region to the east. State Highway 111 is essentially an intra-valley roadway which connects the Valley with the communities of the Imperial Valley to the southeast. Highway 86 connects the eastern Valley to Imperial Valley, and Highway 74 connects the central Valley with mountain communities, southwestern Riverside County, and northern San Diego County.

Traffic patterns in the planning area are governed to some extent by the geographic constraints imposed by the Santa Rosa and Coral Reef Mountains and the existing development pattern. Major east-west conveyance is achieved primarily along Interstate 10 and Highway 111, with secondary east-west circulation in the City and planning area provided by 42nd Avenue, Fred Waring Drive,

² Environmental Hazards and Resources Element, "Riverside County Comprehensive General Plan," Riverside County Planning Department, adopted March 6, 1984 and revised June 3, 1993.

50th Avenue and Airport Boulevard. Major north-south arterials in the City include Washington Street, Jefferson Avenue and Madison Avenue.

Major intersections in the City are important components of the regional roadway system. Of particular importance are those intersections which provide access to regional arterials, including Interstate-10 and Highway 111. The current functionality and future demand of roadways and intersections are discussed in detail in Section III-C of this document.

G. Hydrology

As discussed above, most regional precipitation occurs during the cooler months, from November through March. However, occasional high-intensity thunderstorms and tropical storms can occur between mid-summer and early fall. Given the lack of vegetation and the composition of regional soils, high-intensity precipitation events in the desert can result in substantial runoff and flooding. Although the ground may be generally dry at the beginning of a storm, sufficient amounts of rainfall can saturate the surface, reducing percolation and increasing runoff. Overland flow, which occurs when rainfall intensity exceeds the infiltration capacity of the soil, is especially predominant on hillsides and paved surfaces. Given the hillside terrain in the southern and southwestern portions of the General Plan planning area, overland flow and flooding may be issues of concern.

The Federal Emergency Management Agency (FEMA) publishes Flood Insurance Rate Maps (FIRM) which depict varying degrees of potential flood hazards for developed or developing areas of communities throughout the United States. FIRM maps serve as the basis for determining the need for federal flood insurance and assist local governments in providing for safe land use and floodplain development. The frequency of flooding on a given site is often referred to as the "base flood," or the 100-year flood, which has a one percent probability of occurring in a given year.

According to FIRM maps for the City of La Quinta and the surrounding planning area, the flood hazard is primarily associated with storm flooding and drainage from the Santa Rosa and Coral Reef Mountains. Limited portions of the planning area occur within the 100-year flood zone, including lands in the vicinity of Eisenhower Drive and Washington Street, south of the La Quinta Evacuation Channel. The 100-year flood is also contained within the Whitewater River, the La Quinta Evacuation Channel, and a series of channels, dikes and detention basins surrounding the Cove neighborhood.

The Coachella Valley Water District (CVWD) is responsible for the management of regional drainage within and in the vicinity of the City of La Quinta, and the City is responsible for managing local drainage. Both the City and CVWD have participated in the construction of stormwater drainage improvements in the planning area, some of which include the Coachella Valley Stormwater Channel, the La Quinta Evacuation Channel, the Upper Bear Creek drainage system, and the East La Quinta Channel. The Whitewater River, which is referred to as the Coachella Valley Stormwater Channel in La Quinta, passes through the northern portion of the City, and is the largest drainage feature in the Coachella Valley. A more detailed discussion of existing and proposed flood control improvements is provided in Section III-E of this document.

H. Soils and Geology

Seismicity

The Coachella Valley region is susceptible to a wide range of hazards associated with geotechnical conditions. The City of La Quinta is part of the northwestern extension of the Salton Trough, a broad structural depression which has been formed by the landward extension of the East Pacific Rise ridge and fault system. This spreading ridge is responsible for separating Baja California from mainland Mexico and creating the Gulf of California, the Imperial Valley and the Coachella Valley. This spreading action is also responsible for moving the Pacific Plate to the northwest relative to the North American Plate, and resulting in the generation of earthquakes that occur in southern California.

Recent analysis indicates that far too few earthquakes have occurred in southern California in the last 200 years to account for the rate of movement between the Pacific and North American plates. The data suggest that the region will be subject to either numerous moderate earthquakes or a few larger (Magnitude 7.2 or higher) earthquakes in the next twenty to thirty years.

Although no active or potentially active faults are known to occur within the planning area, the San Andreas, San Jacinto, and Elsinore Fault Zones are located in the vicinity and are capable of impacting development in the planning area. Issues associated with these geotechnical conditions include ground shaking, liquefaction, rock falls and landslides, subsidence and seismically induced settlement. The potential for these hazards to occur in the planning area will be discussed in more detail in Section III-D.

Soils

Geotechnical constraints in the planning area are also affected by the characteristics of the rocks and sediments that lie beneath the area. The City lies at the base of the Santa Rosa and Coral Reef Mountains, and is primarily underlain by four types of geologic deposits: granitic basement rock associated with the mountains, lacustrine deposits associated with former bodies of water, alluvial deposits shed from the mountains, and blowing sand deposits.

The granite which borders the City to the south is more than 65 million years old, and forms the basement rock of the region. The granite forms steep slopes which have weathered over time, forming large boulders that pose a rockfall hazard to areas adjacent to and downgradient from these slopes. Interbedded Quaternary lake and alluvial deposits underlie much of the central and eastern planning area, and were deposited by ancient Lake Cahuilla and other large lakes that inundated the Salton Trough as recently as 400 years ago. Alluvial deposits are primarily found at the mouths of drainages emanating from the Santa Rosa Mountains. The northern portion of the City and planning area, north of and surrounding Highway 111, is underlain by active sand dunes. Additional discussion of the geologic units underlying the planning area is provided in Section III-D.

I. Water Quality/Resources

Analyses conducted by the US Geological Survey and the California Department of Water Resources of groundwater basins underlying the Coachella Valley have determined that these basins are separated into distinct subbasins and subareas within subbasins. Fault barriers that create constrictions in the basin profile, and areas of low permeability limit and control the inflow and movement of groundwater. It has been estimated that the first 1,000 feet of the Ocotillo Conglomerate and other water-bearing infill that has eroded into the fault-controlled valley floor have a total storage capacity of more than 39 million acre-feet (one acre foot equals about 327,000 gallons).³

Domestic Water Resources

Domestic water is provided to the City and unincorporated lands in the southeasterly portion of the planning area by the Coachella Valley Water District (CVWD). The Myoma Dunes Mutual Water Company provides domestic water to the Bermuda Dunes area in the northern portion of the planning area. Both agencies utilize wells to extract groundwater from the Whitewater River subbasin. The subbasin is recharged both naturally, through percolation of runoff from the Santa Rosa and Coral Reef Mountains, and artificially through the importation of Colorado River water transported via the Colorado River Aqueduct.

Whitewater River Subbasin

The Whitewater River Subbasin encompasses a major portion of the Coachella Valley floor, covering approximately 400 square miles and extending from the junction of Interstate-10 and State Highway 111, southeast approximately 70 miles to the Salton Sea. It is divided into four subareas: Palm Springs subarea, Thermal subarea, Thousand Palms subarea, and Oasis subarea. The General Plan planning area is underlain by the lower Thermal Subarea.

Depletion of the groundwater in storage in the Whitewater River Subbasin has continued steadily since the expansion of agricultural activities in the early 1900's. Also contributing to the overdraft is the development of the Coachella Valley as a destination resort area, with numerous golf courses and lushly landscaped residential developments.

With the introduction of Colorado River water into the lower Coachella Valley in 1951, the total amount of water in storage in the Valley began to increase. Between 1935 and 1951, the drawdown on the Whitewater River Subbasin resources totalled approximately 760,000 acre-feet. The increase of water in storage after 1951 generally represents unusable semi-perched ground water from agricultural irrigation in the lower valley and did not represent an increase in a usable water supply. These perched waters may one day become available for use when treatment becomes cost-effective.

Water Quality

Water quality in the Coachella Valley is generally good to excellent. Exceptions are primarily limited to perched and semi-perched water tables occurring in the southern portions of the

³ "Engineer's Report on Water Supply and Replenishment Assessment 1998/99," prepared by Water Resources Branch, Engineering Department, Coachella Valley Water District, April 1998.

Whitewater River Subbasin, where on-going crop irrigation has increased total dissolved solids. Another more recent, but less extensive impact on area groundwater has been contamination associated with long-term discharge from on-lot septic systems. These and other water resources issues are discussed in more detail in Section III-F.

J. Biological Resources

The Coachella Valley and the City of La Quinta are located at the western edge of the Colorado Desert sub-unit of the Sonoran Desert. The San Jacinto, San Bernardino and Santa Rosa Mountains effectively isolate the Valley from moderating coastal influences from the west. As a result, the region is characterized by extremely hot daily temperatures during the summer, mild winters, low humidity and low mean annual rainfall.

The desert floor generally supports sparse vegetation which is limited by heat and aridity. However, the regional climate becomes milder with increasing elevation, and regional mountain slopes are capable of supporting more vegetation. Canyons and springs support native fan palm communities and a wide variety of other plants and animals. The various habitat types supported in the General Plan planning area are briefly described below.

Habitat Communities

Stabilized Sand Dunes

Most lands north of 50th Avenue are comprised of stabilized, shielded desert sand fields. This habitat consists of windblown sand that is stabilized by vegetation and lacks dune formation. While this natural community provides potential habitat for the endangered Coachella Valley milkvetch, much of it has been disturbed by roads and urban development, and none is of such high quality that it has been targeted for conservation.

Mesquite Hummocks

Mesquite hummocks consist of large clumps of honey mesquite occurring on level terrain and/or over sand dunes. These plant communities are typically associated with the presence of high soil moisture or springs, and provide valuable habitat to a number of birds, as well as the Palm Springs round-tailed ground squirrel.

Sonoran Creosote Bush Scrub

Sonoran creosote bush scrub is the most common natural community in the Coachella Valley, and is generally found above the shoreline of ancient Lake Cahuilla. Dominant plant species include creosote bush, brittlebush and burrobrush.

Sonoran Woody and Succulent Scrub

The lower slopes of the Santa Rosa Mountains are comprised of Sonoran mixed woody and succulent scrub. This community contains diverse perennial shrubs, brittlebush, creosote bush, catclaw acacia, and several species of cacti. Sensitive species associated with this community include California ditaxis and glandular ditaxis.

Desert Dry Wash Woodland

Desert dry wash woodland habitat occurs within desert washes on alluvial fans below the Santa Rosa Mountains, including areas south of the Cove and east of Bear Creek. Dominant species include smoke tree, palo verde and cheesebush. Desert washes often serve as travel corridors for wildlife using both the valley floor and mountainous habitat, and also provide important habitat for a wide range of bird species.

Tamarisk Scrub

Tamarisk scrub represents any of several *Tamarix* species, which usually supplant native vegetation following major ground surface disturbances. This community is actually misnamed as a “natural” community, since it is not composed of indigenous plant species. Within the planning area, it is prevalent near the Desert Resorts Airport.

The rocky slopes of the Santa Rosa Mountains offer habitat to a wide range of wildlife including bighorn sheep, chuckwalla, golden eagles and mountain lions. Plant species include perennials and annuals, with plant size and density increased with elevation and associated increased in annual rainfall.

Sensitive Wildlife Species

The Coachella Valley and City of La Quinta are host to a wide variety of sensitive plant and animal species, some of which have been listed as threatened or endangered by the state and federal governments. Most notable of these are the Coachella Valley fringe-toed lizard, desert tortoise, Coachella Valley milkvetch, and Peninsular bighorn sheep.

Regional Biological Resource Areas

Various governmental organizations and public/quasi-public agencies have established biological resource areas in the Coachella Valley. The Santa Rosa Mountains Wildlife Habitat Area (WHA) is located in the upper foothills of the Santa Rosa Mountains, and is managed by the Bureau of Land Management, the California Department of Fish and Game (CDFG), the U.S. Forest Service, and the University of California. The primary goal of the WHA is to manage the population of Peninsular bighorn sheep within the Santa Rosa Mountains by preserving the natural, undisturbed character of its habitat. Much of the Santa Rosa Mountains have been designated as a Game Refuge by CDFG, primarily for the protection of the bighorn. Two sections of land in the southwestern portion of the planning area are designated as a Wilderness Study Area, and are eligible for classification as “Wilderness” by Congress due to their primeval, undisturbed character. Each of these resource areas is discussed in greater detail in Section III.

K. Cultural Resources

Cultural resources in the Coachella Valley include Native American settlements that were established before and after the arrival of European-Americans, as well as historical structures and features that were built and used as early as the 1700’s by European settlers.

Pre-European Period

Based upon the current knowledge of artifacts and habitation sites dating back approximately 12,000 years, archaeologists have divided the pre-European epoch into five periods: Early Man Period, Paleo-Indian Period, Early Archaic Period, Late Archaic Period and Late Prehistoric Period.

The earliest prehistoric periods were characterized by the use of large stone points for the hunting and processing of large iceage mammals. As the climate and food resources changed, local inhabitants began using smaller projectile weapons to hunt smaller game. This period involved substantial migration of people. About 4,000 years ago, cultural complexity and variation improved, and stone tools became more sophisticated, thereby allowing for the processing of seeds and grains.

By about 1,500 years ago, the milling of food stuffs continued. The bow and arrow were introduced around this time, facilitating additional hunting opportunities. During the latest period, from around 1200 to just before European contact in the 1700's, local inhabitants traded extensively with tribes of the Colorado River and learned to make pottery for cooking and food storage. Archaeological evidence indicates that numerous settlements and other cultural sites were established throughout the Coachella Valley. Among these sites were villages, milling sites used on a seasonal basis to process food materials, lithic workshops for making stone tools and weapons, and artistic and religious rock sites.

Cahuilla Culture

The Cahuilla are the most recent identifiable native culture to evolve in the Coachella Valley region. They are generally divided into three groups: the Pass Cahuilla of the Banning-Beaumont area; the Mountain Cahuilla of the San Jacinto and Santa Rosa Mountains; and the Desert Cahuilla of the Coachella Valley, as far south as today's Salton Sea. Each clan, or lineage, had its own food harvesting areas, ceremonial house and lineal chief, but a number of lineages are known to have cooperated with one another for political and economic purposes.

The Desert Cahuilla had many villages throughout the Coachella Valley, including those associated with ancient Lake Cahuilla, which evaporated in A.D. 1500. With the lake's disappearance, mountains and canyons became more important sources of water, food and fiber.

In the mid-1850's, during the earliest government surveys of the La Quinta area, surveyors observed eight Indian villages in or near the planning area, almost all of which were important settlements of the Desert or Pass Cahuilla. One of the most prominent of these settlements was the village of Toro, located at the edge of the planning area. Other man-made features associated with the Cahuilla in the planning area include a system of trails and roads. The first Cahuilla contact with Europeans occurred in the 1770's, when Spaniards crossed through Cahuilla territory in search of new land routes between Mexico and northern California.⁴ During the 1860's, European disease, to which the Cahuilla had no immunity, decimated the Cahuilla population which declined from an estimated 6,000 to 10,000 people to only 2,500 individuals.⁵

⁴ "The Cahuilla," Lowell John Bean and Lisa Bourgeault. Chelsea House Publishers, 1989.

⁵ Ibid.

Non-Indian Settlement of Coachella Valley

Non-Indian settlement of the Coachella Valley began in the 1870's with the establishment of railroad stations along the Southern Pacific rail line. The earliest settlement in the City of La Quinta, however, did not occur until the early 1900's, when several desert land claims and homestead claims were filed with the U.S. General Land Office (GLO) on various parcels within the planning area. The construction of the La Quinta Hotel in 1926 provided the impetus for resort-style development, and by the early 1930's, the Cove subdivision was established to satisfy the demand for weekend resort homes.

Issues associated with the location of both prehistoric and historic resources in the planning area are further addressed in Section III-H.

L. Visual Resources

Among the Coachella Valley's most valuable assets is its exceptional mountain and open space views. The Valley is flanked by the San Jacinto Mountains to the west, the San Bernardino and Little San Bernardino Mountains to the north, and the Santa Rosa Mountains to the south, all of which were created by complex geological forces. The resulting viewsheds include contrasting mountain scenery and vast expanses of desert on the valley floor. Views of the San Jacinto and Santa Rosa ranges, in particular, are highly valued.

The San Jacinto Mountain Range extends from its highest elevation at Mt. San Jacinto at the extreme north, southward to the Santa Rosa Mountains. Mt. San Jacinto is the highest peak in this range, reaching an elevation of 10,804 feet above sea level. The San Jacinto Mountains are located approximately 12 miles northwest of the City.

The San Bernardino and Little San Bernardino Mountains comprise the elevated terrain that forms the northern and northwestern boundary of the Coachella Valley. San Geronimo peak in the San Bernardino Mountains is the highest peak in the region and rises to an elevation of 11,502 feet. The Little San Bernardino range occurs about ten to twelve miles north of the planning area.

Edom Hill, Flat Top Mountain and other features of the Indio Hills are located approximately four miles north and northwest of the planning area. These hills stand at more than 1,000 feet above the valley floor. They provide a vivid display of color in late afternoons.

Perhaps the most important visual resources to the City of La Quinta are the Santa Rosa and Coral Reef Mountains, which extend through the westerly and southwesterly portions of the planning area. The Santa Rosa Mountains, in particular, provide a dramatic backdrop to the lands and built environment located on the valley floor. The highest peaks include Toro Peak at 8,717 feet and Santa Rosa peak at about 8,000 feet.

M. Air Quality

The air quality of a particular locale is based on the amount of pollutants emitted and dispersed, and climatic conditions that may reduce or enhance the formation of pollutants. In the Coachella Valley, the responsibility for establishing criteria by which air quality is measured lies with the South Coast Air Quality Management District (SCAQMD).

The air quality of the Coachella Valley and City of La Quinta is generally considered good, particularly when compared to other areas of Southern California. Nonetheless, in the past few decades, noticeable deterioration of air quality has occurred due to increased development and population growth, traffic, construction activity and various other site disturbances. It is apparent that, although some air pollutants are emitted from various sources in the Coachella Valley, the most evident degradation of regional air quality can be attributed mainly to sources outside the area, including the Los Angeles County and San Bernardino/Riverside air basins.

Ozone and PM₁₀ (see below) are the most prevalent air pollutants in the Coachella Valley. Other pollutants are not believed to constitute significant threats to public health. Regionally representative air quality measurements are routinely taken for PM₁₀ and ozone, with monitoring conducted in Indio and at the Palm Springs International Airport. The La Quinta area is expected to occasionally exceed the state standard for ozone (0.09 ppm/hr) and to less frequently exceed the federal standard (.12 ppm/hr).

Suspended particulate matter is the most serious air quality issue faced by the region, which occasionally exceeds both state ($>50\mu\text{g}/\text{m}^3$ or 50 micrograms per cubic meter) and federal ($>150\mu\text{g}/\text{m}^3$) standards for especially small particles of 10 microns or smaller; these pollutants are known as PM₁₀. The Coachella Valley region is currently classified as a federal "nonattainment area" for PM₁₀. However, recent monitoring data indicate that substantial improvements in PM₁₀ emissions have been made over the past several years, and the region is now eligible for reconsideration by the U.S. EPA having attained the federal PM₁₀ standard. The EPA was expected to issue its opinion regarding attainment status in the year 2000.

N. Noise

Concern regarding the potential psychological and physiological impacts of noise pollution has increased significantly in recent years. Excessive noise levels can cause temporary, as well as permanent physical damage and psychological distress in many people. Some examples of noise related damage are incremental hearing loss, and noise related stress, including sleep disruption and anxiety.

The most common sound range is between 40 dB (very quiet) and 100 dB (very loud). Conversation at three feet is roughly at 60 dB, while loud engine noise, which can cause discomfort, equates to about 100 dB. Community noise impacts are commonly evaluated using the Community Noise Equivalent Level (CNEL) noise index, which reduces the combined effect of daily noise exposure to a single number. The value computed by this method is the sum of the decibel values of the sound, averaged over 24 hours, with corrections for time of day.

The predominant noise source in the City and region is vehicular traffic associated with arterials and highways, including Interstate-10, State Highway 111 and Washington Street. Lands in the immediate vicinity of the Thermal and Bermuda Dunes airports may experience occasional, moderate noise intrusions from aircraft overflights. These potential impacts are further assessed in Section III.

O. Public Facilities and Services

A wide range of public services and facilities are currently provided within the City of La Quinta and the vicinity. These include local and regional governmental services, special districts, and services and facilities provided by public utilities. Service providers are identified below, and the extent of their services is discussed further in Section III-L.

Domestic Water

Domestic water services are provided to the City of La Quinta and much of the Coachella Valley by the Coachella Valley Water District (CVWD). The Myoma Dunes Mutual Water Company provides domestic water to development in the Bermuda Dunes area. Both agencies derive water resources principally from the Whitewater River Subbasin, which underlies the City and much of the upper Coachella Valley. Groundwater resources are also augmented through the recharging of the aquifer with Colorado River water delivered through the Colorado River Aqueduct, owned and operated by the Metropolitan Water District. Currently, the groundwater resource is in an overdraft condition.

Wastewater Treatment

Wastewater collection and treatment services and facilities are provided to the City by the Coachella Valley Water District. Wastewater collected north of Miles Avenue is conveyed to and treated at a wastewater treatment plant located at Madison Street and Avenue 38. Effluent collected from the remainder of the planning area is conveyed to the Mid-Valley Reclamation Plant located on Avenue 63, between Fillmore and Pierce Streets. While much of the planning area is sewered, many businesses and residences still utilize individual septic systems, particularly scattered development in Bermuda Dunes and most development south of Airport Boulevard.

Solid Waste

Solid waste collection and disposal services are provided by several vendors in the Coachella Valley. Waste Management of the Desert provides these services to much of the planning area, including the City of La Quinta, Bermuda Dunes and Thermal. Waste Management of the Desert operates a curb-side recycling program which has substantially diverted recyclables from the waste stream entering area landfills. Most solid waste collected in the planning area is disposed of at the Edom Hill Landfill, while a small amount of waste collected in Thermal is transported to the Mecca Landfill. The Edom Hill Landfill is nearing capacity, and the City and Waste Management will need to assess alternative landfill sites which can accommodate waste generated by existing and future development.

Natural Gas

Natural gas is typically used for space heating and commercial and industrial process heating, as well as cooking and some air conditioning applications. Natural gas service is provided to much of the planning area by The Gas Company, formerly known as Southern California Gas Company. Natural gas is transported to the region via high-pressure transmission lines north of Interstate-10, and delivered to development through lower pressure supply and distribution lines. Natural gas service is available to most development in the planning area, however, its availability is limited south of Air port Boulevard and in the Cove area of La Quinta.

Electricity

Electric power services are provided to the planning area by the Imperial Irrigation District (IID), which operates six substations in the planning area. IID is a water and power district primarily serving the agricultural areas of the Imperial and Coachella Valleys. IID plans for and accommodates future development in order to avoid service deficiencies, and has identified the need for a new substation between the La Quinta city limits and Thermal Airport to meet future demands.

Education

The planning area is served by two public school districts: Desert Sands Unified School District (DSUSD), which serves students living west of Jefferson Street and north of Avenue 48, and Coachella Valley Unified School District (CVUSD), which serves the remainder of the planning area.

DSUSD currently operates five schools in the planning area and has no immediate plans to construct any new schools within the planning area boundaries. However, plans to build two new schools within one mile of the planning area may help alleviate overcrowding in existing schools.

CVUSD operates three schools in the planning area, and is planning a large, 3-school campus at the southerly boundary of the planning area.

Private education is provided to the planning area by Christian School of the Desert and several other schools in the Valley.

Library

The La Quinta Public Library is a branch of the Riverside County Library System and is located at 79-080 Calle Estado. The facility originally opened in 1988, but was rededicated in 1999 to celebrate its expansion to 4,130 square feet. The library contains approximately 28,000 volumes, as well as a computer lab and reference section. A new 10,000 square foot library is being planned for the City Hall complex and is expected to open in year 2002.

Health Facilities

In addition to a number of private physicians' offices, several large health care facilities are located in the vicinity of La Quinta. The John F. Kennedy Memorial Hospital in Indio has 130 patient beds and approximately 85 active physicians. Hospital facilities include a 24-hour emergency room, intensive care unit, cardiac care unit and other specialized care facilities.

The Eisenhower Medical Center complex is located in Rancho Mirage and encompasses 98 acres. It consists of four facilities: Eisenhower Medical Center, Betty Ford Center for Chemical Dependency, Barbara Sinatra Children's Center, and the Annenberg Center for World Health Sciences. The center is licensed for 261 beds and includes an emergency room, intensive care unit, cardiac care unit and other specialized care units.

Desert Regional Medical Center is located in Palm Springs, approximately ten miles northwest of La Quinta. The hospital is a private, non-profit hospital that is licensed for 305 acute-care beds and includes a 24-hour emergency room, trauma center, Home Health Care department and Hospice of the Desert.

Fire Protection

Fire protection services are provided to the City of La Quinta and its planning area by the Riverside County Fire Department. The planning area is serviced by six fire stations with overlapping coverage areas, including two in La Quinta, one in Bermuda Dunes, one in Indio, one in Indian Wells, and one near the Thermal Airport. The County Fire Department has plans to construct a new fire station in north La Quinta, near the intersection of Westward Ho and Dune Palms Road.

Police Protection

The Riverside County Sheriff's Department provides police protection to the City of La Quinta, its sphere-of-influence and the planning area. The sheriff's station serving the planning area is located on Doctor Carreon Boulevard in Indio. Three sheriff's units and one Community Services Officer are currently assigned to the City, while incidents and patrols within the unincorporated planning area are handled by County beat cars.

O. Socio-Economic Resources

Since 1990, the City of La Quinta has been the fastest growing city in the Coachella Valley, with population increases averaging about 10% per year. The City's 2000 population was estimated at 24,240 residents.⁶ The average age in La Quinta is 32 years, slightly younger than the state average of 36 years. The average City resident also enjoys a higher per capita income of \$19,700 than the average Riverside County resident (\$17,400) or state resident (\$18,400). Household incomes are also relatively high, averaging about \$70,000.⁷

The Coachella Valley economy was based on agricultural activity for much of the past century. However, over the past four decades, the region has become one of the premier destination resort areas in the country. Golf-oriented resort development has generated a tremendous market for taxable sales of all types, including apparel, building materials, automobiles, art, dining and other retail. As a result, retail sales in the resort market area are approximately four times those expected to be generated by the permanent resident population.

⁶ California Department of Finance, January 1, 2000.

⁷ "La Quinta Market Analysis and Competitive Position Within the Coachella Valley," prepared by Sedway Group, January 25, 1999.

La Quinta is a relatively new market in the Coachella Valley, but one which has grown rapidly. Historically, the City has been identified with the La Quinta Hotel and PGA West golf course, and these facilities continue to provide the City with national recognition as a resort-oriented community. However, La Quinta is also emerging as a sub-regional retail center for the eastern-central portion of the Valley, and has attracted several large retailers, including Wal-Mart and Home Depot. Employment in the City is generally service-oriented or associated with construction, retail, landscape and management industries. A detailed discussion of socio-economic conditions in the City can be found in Section III-M.

CITY OF LA QUINTA

DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE COMPREHENSIVE GENERAL PLAN, ANNEXATION NO. 12 AND SPHERE OF INFLUENCE AMENDMENT

III. EXISTING ENVIRONMENTAL CONDITIONS, PROJECT IMPACTS, AND MITIGATION MEASURES

Introduction

The adoption of the City of La Quinta General Plan, Annexation No. 12 and the proposed sphere of influence (SOI) amendment constitutes “projects” under the California Environmental Quality Act (CEQA) Statutes and the State CEQA Guidelines. An Initial Study and Environmental Checklist were completed by the City of La Quinta, and specific areas of potential significant effect on the environment associated with the adoption and implementation of the proposed General Plan, Annexation No. 12 and the SOI amendment were identified. At that time, it was determined that an Environmental Impact Report (EIR) was required. On April 23, 2001, a Notice of Preparation was completed and transmitted to local, regional, state and federal responsible agencies, as well as other interested groups. Both the Initial Study and Notice of Preparation can be found in Appendix A of this document.

This section of the Environmental Impact Report addresses those issues which have been identified by the City’s Initial Study, those raised in public meetings, those identified by the environmental consultant and subconsultants, and those raised by local and state agencies in response to the EIR Notice of Preparation. Issues raised are those which potentially constitute significant environmental hazards or impacts to resources, preclude implementation of the General Plan, or constitute potentially significant impacts which may result as a consequence of implementation of the General Plan.

In this section, existing conditions within the planning area are discussed. The identified hazards and impacts are then assessed, and proposed mitigation measures and their efficacy are presented. Satisfactory mitigation is measured by the elimination or reduction of hazards or impacts to acceptable or insignificant levels. Where appropriate, mitigation monitoring and reporting programs are recommended in conformance with California Public Resources Code 21081.6, which shall assure compliance over the implementation life of the General Plan. Inasmuch as the General Plan is a policy and program document, implementation and monitoring are inherent elements of the “project.”

A. Land Use Compatibility

1. Existing Conditions

The City of La Quinta has evolved from a predominantly rural, agricultural area and an important provider of dates and citrus, to a low density residential community. The community developed around the historic Bradshaw Trail, which served as a freight and stage line in the late 1800's and early 1900's, and early homestead ranches in the vicinity of present-day Washington Street and Highway 111. The success of the La Quinta Hotel, constructed in 1926, earned the City its reputation as a resort community and provided the impetus for additional resort development.

Today, the community continues to reflect these earlier trends. While the City has preserved its rural character to some extent, it has also expanded to become a sub-regional retail center for the central and eastern Coachella Valley, having attracted such large retailers as Home Depot and Wal-Mart. The City also includes a wide variety of housing types, including low density gated communities, conventional single-family residential neighborhoods, and a mix of medium density communities in the Cove and Village areas.

The Recommended Alternative of the General Plan does not propose changes in land use designations within the City limits which would significantly change the existing development pattern in the City. Proposed land use intensity for residential land uses are consistent with those which already occur in the community, and focus on low density, single family detached development. Proposed commercial land use designations occur in areas which are currently occupied by commercial development, or in currently vacant areas are proposed to be convenient to the proposed residential development which is expected to occur. No industrial development currently occurs within the City limits. Industrial land use designations are proposed primarily in the area surrounding the Desert Resorts Airport, in an area which currently has scattered industrial development. Areas currently in open space are proposed to be maintained as such with the Open Space land use designation. These areas focus primarily on the Santa Rosa and Coral Reef Mountains to the west and south of the City's urbanized core.

In the northern planning area, where most lands are developed, land use designations have been proposed which directly reflect existing development. Land use designations on vacant lands are proposed to be consistent with surrounding existing development, with commercial land uses on major arterials, and decreasing intensities of residential development occurring away from major roadways. This proposed land use is consistent with the existing development within this portion of the planning area.

In the southeastern planning area, land use designations proposed represent an intensification of current land uses. Development in this area is currently scattered, and consists of large lot single family residential, farming interests, and vacant desert lands. A more detailed quantification of the existing land use pattern is provided below.

Existing Land Uses

Within the City limits, development is constrained and influenced by the topography of the Santa Rosa and Coral Reef Mountains, and generally occurs north of 52nd Avenue and east of Jefferson Street. The exception is the Cove community, which occurs on an alluvial plain bounded on the west and south by the Santa Rosa Mountains, and on the east by the Coral Reef Mountains.

The General Plan planning area consists of a total of 53,498± acres, including 20,254± acres in the City limits, and 33,244± acres in the sphere-of-influence and lands outside the sphere and within the planning area. Approximately 61% (32,897 acres) of the planning area is currently developed. Of developed lands, about 75% (24,898 acres) are in residential uses, which are dominated by low density, single family units in the City limits and very low density agricultural uses in the remainder of the planning area. Of the City's total housing stock, approximately 92% (11,197 units) are attached and detached single-family units, 6% (697 units) are multi-family units, and the remaining 2% (247 units) are mobile homes.

Commercial lands provide a wide range of retail services, including neighborhood and community-scale retail, tourist commercial, office and mixed use commercial facilities. Of all the lands in the planning area, commercial land uses represent about 3% (1,624 acres). Major community facilities represent about 0.5% (218 acres). Parks, golf courses, and watercourse/flood control facilities comprise about 10% (4,502 acres) of lands. Industrial designations accommodate a variety of light and heavy industrial activities, including manufacturing, warehousing and distribution operations. Industrial uses comprise approximately 3% (1,360 acres) of all lands, none of which occur within the City limits. Airport uses account for 4% (2,184 acres) of all lands, and include the Bermuda Dunes and Desert Resorts Airports.

Land use patterns established under the current General Plan for the City and Riverside County are illustrated on Exhibit III-1. Table III-1 provides a breakdown of acreages occurring under each land use category, and estimates potential future development that could occur at buildout of the current General Plans. Analysis of existing development intensities in the planning area indicates that development does not typically occur at the maximum densities permitted under each land use category. Rather, development in the planning area has generally occurred at more moderate densities. Buildout development projections shown in Table III-1, therefore, are based on the following assumptions:

- Residential development is expected to occur at 75% of the maximum permissible densities.
- Buildout of commercial lands assumes 22% lot coverage.
- Buildout of industrial lands assumes 34% lot coverage.

The Table represents land use designations in the City and planning area. Land use designations outside the City limits are under the jurisdiction of Riverside County at this time. All designations are represented under current conditions, based on either the City's or County's standards for that designation.

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Exhibit III-1

City of La Quinta

General Plan

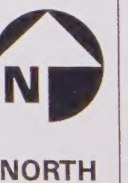
(Existing)

LEGEND

- Roads**
 Township/Range Sections
 Railroads
 City Limits
 General Plan Planning Area
 City Sphere of Influence
- Residential Land Uses**
 VLDR Very Low Density 0-2 du/ac
 AG Agriculture 1 du/ac
 4
 3B 0.2-0.4 du/ac
 3A 0.4-2 du/ac
 LDR Low Density 2-4 du/ac
 2B 2-5 du/ac
 MDR Medium Density 4-8 du/ac
 2A 5-8 du/ac
 2A MF 5-8 du/ac
 RM 8 du/ac
 MHDR Medium-High Density 8-12 du/ac
 HDR High Density 12-16 du/ac
 RH 15 du/ac
 Hillside Overlay
 Rural Residential Overlay
 Non-Residential Overlay
- Commercial Land Uses**
 M/RC Mixed Commercial
 AP/MU Air Park/Mixed Use
 CC Community Commercial
 C Commercial
 NC Neighborhood Commercial
 CP Commercial Park
 O Office
 TC Tourist Commercial
 VC Village Commercial
- Other Land Uses**
 HI Heavy Industrial
 LI Light Industrial
 M Manufacturing
 MC Major Community Facilities
 PF Public Facilities
 School
 P Park Facilities
 OS Open Space
 G Golf Course Open Space
 W Watercourse/Flood Control
 AP Airport

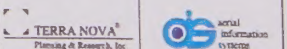
Scale
1:31,875

0 4,000 8,000 12,000
Feet



Riverside County Vicinity Map

Map Prepared on: July 28, 2000
 Map Prepared by: Aerial Information Systems
 Map Version No.: 5



**Table III-1
Current General Plan
Land Use Buildout Statistical Summary**

Land Use	Total Acres	Dev. Acres	Vacant Acres	Existing Units	Potential Units¹	Bldout Units
AG Agriculture (1 du/10 ac)	19,938	16,152	3,786		284	
4 (0 - 0.2 du/ac)	395	124	271		41	
VLDR Very Low Density (0-2 du/ac)	891	571	320		480	
3B (0.2 - 0.4 du/ac)	275	234	41		12	
3A (0.4 - 2 du/ac)	719	459	260		390	
LDR Low Density (2-4 du/ac)	7,481	3,760	3,721	11,197*	11,163	32,631
2B (2-5 du/ac)	2,518	1,153	1,365		5,119	
RL (4 du/ac)	419	208	211		633	
MDR Medium Density (4-8 du/ac)	1,626	1,235	391		2,346	
2A (5-8 du/ac)	55	45	10		60	
2A MF (5-8 du/ac)	209	158	51		306	
RM (8 du/ac)	459	359	100		600	
MHDR Medium-High (8-12 du/ac)	479	336	143	944**	1,287	4,387
HDR High Density (12-16 du/ac)	101	1	100		1,200	
RH (15 du/ac)	188	103	85		956	
Residential Subtotal	35,753	24,898	10,855	12,141	24,877	37,018
	Total Acres	Dev. Acres	Vacant Acres	Existing Sq.Ft.²	Future Sq.Ft.²	Total Sq.Ft.²
M/RC Mixed Commercial	588	156	432	1,494,979	4,139,942	5,634,921
AP/MU Air Park/Mixed Use	84	70	14	670,824	134,165	804,989
CC Community Commercial	111	20	91	191,664	872,071	1,063,735
C Commercial	217	136	81	1,303,315	776,239	2,079,554
NC Neighborhood Commercial	75	54	21	517,493	201,247	718,740
CP Commercial Park	64	0	64	0	613,325	613,325
O Office 88	48	40	459,994	383,328	843,322	
TC Tourist Commercial	272	166	106	1,590,811	1,015,819	2,606,630
VC Village Commercial	125	72	53	689,990	507,910	1,197,900
Commercial Subtotal	1,624	722	902	6,919,070	8,644,046	15,563,116
HI Heavy Industrial	132	132	0	1,954,973	0	1,954,973
LI Light Industrial	121	121	0	1,792,058	0	1,792,058
M Manufacturing	1,041	458	583	6,783,163	8,634,463	15,417,626
W/D Warehousing/Distribution	66	48	18	710,899	266,587	977,486
Industrial Subtotal	1,360	759	601	11,241,093	8,901,050	20,142,143

Table III-1 (cont'd)
Current General Plan
Land Use Buildout Statistical Summary

	Total Acres	Dev. Acres	Vacant Acres	Existing Sq.Ft.²	Future Sq.Ft.²	Total Sq.Ft.²
MC Major Community Facility	115	103	12	--	--	--
PF Public Facility	37	0	37	--	--	--
School	68	57	11	--	--	--
AP Airport	2,184	560	1,624	--	--	--
Public/Quasi-Public Subtotal	2,404	720	1,684	--	--	--
P Park Facilities	909	795	114	--	--	--
OS Open Space	7,855	1,890	5,965	--	--	--
G Golf Course	2,992	2,646	346	--	--	--
W Watercourse/Flood Control	601	468	133	--	--	--
Open Space Subtotal	12,357	5,799	6,558	--	--	--
Total	53,498	32,898	20,600	--	--	--

* Includes attached and detached single family housing units, as categorized by CA Dept. of Finance, 2000.

** Includes multi-family housing units from two to five-plus and mobilehomes, as categorized by CA Dept. of Finance, 2000.

¹ Assumes 75% of the total number of units possible, at maximum permitted density.

² Assumes 22% lot coverage for commercial development, and 34% lot coverage for industrial development.

Surrounding Land Uses

Surrounding land uses are under the jurisdiction of Riverside County and four cities: Palm Desert, Indian Wells, Coachella, and Indio. Riverside County lands border the planning area to the north and are designated for low and medium density residential uses, with limited commercial lands at the I-10/Washington Street and I-10/Jefferson Street interchanges.¹

Lands to the southwest are also under the jurisdiction of Riverside County. These lands occur within the Santa Rosa Mountains and are assigned Open Space designations, including Wildlife/Vegetation and Mountainous Areas. South of the planning area, Riverside County lands are primarily designated for Agriculture, with the exception of limited commercial, manufacturing and low density residential uses in the Valerie Jean community south of Avenue 66.² Lands adjacent to the foothills in this area are designated as Planned Residential Reserve (0-5 du/ac).

¹ "Western Coachella Valley Plan," County of Riverside, adopted December 31, 1985, amended through August 30, 1994.

² "Eastern Coachella Valley Plan," County of Riverside, adopted July 2, 1985, amended through December 27, 1994.

Lands west of the planning area, generally north of Fred Waring Drive and west of Washington Street, are under the jurisdiction of the City of Palm Desert. The majority of these lands are designated for low-density (3-5 du/ac) residential, with limited high density (7-18 du/ac) residential at the southwest corner of Country Club Drive and Washington Street, and a Residential Study Zone on Washington Street south of Hovley Lane.³ Lands at the southwest corner of Hovley Lane and Washington Street are designated for District Commercial uses. A limited area at the southwest corner of Country Club Drive and Washington Street is designated for Commercial-Industrial development, while lands northwest of this intersection are designated for Low Density-Service Industrial development.

Adjoining lands west of the planning area, generally south of Fred Waring Drive, are under the jurisdiction of the City of Indian Wells. Lands along the northwest boundary of the planning area, immediately south of Fred Waring are designated for Community Commercial development. The Whitewater River Storm Channel runs directly south of these commercial lands, and is designated as a Watercourse. A limited area immediately south of the Whitewater River Storm Channel, and north of Highway 111 is designated for medium density (4.6-7.0 du/ac) residential, while lands occurring south of Highway 111 are designated as very low density (1.0-3.0 du/ac), low density (3.1-4.5 du/ac) and medium-high density (7.1-12.0 du/ac) residential. Also south of Highway 111 are lands designated for Golf and Recreation as well as Natural Preserve. Adjoining lands along the southwest boundary of the City of La Quinta's planning area are designated for Open Space, and consist of both Country Club Open Space (COS) as well as Public Owned Open Space (POS).

Lands east of the City of La Quinta and the Bermuda Dunes area, and north of Avenue 52, are under the jurisdiction of the City of Indio. These lands are designated for a broad range of land uses, including country estate residential, and low and medium density residential south of Highway 111, with limited neighborhood commercial lands at the northeast corner of Avenue 50 and Jefferson Street.⁴ Mixed use designations, which provide for a combination of residential and commercial uses, occur along the Highway 111 corridor. Lands between Highway 111 and Interstate-10 generally provide for low density residential development, with business park and limited community commercial designations immediately south of Interstate-10.

Lands to the east of the planning area, south of Avenue 52 and north of Avenue 62, occur within the boundaries of the City of Coachella. These lands are primarily designated for Agriculture (1 du/40 ac). However, some of these lands have been converted from Agriculture to residential lands, and are designated very low density (0-2 du/ac) and low density (0-6 du/ac) residential development. Additionally, there are limited areas north of Avenue 62 that are designated for Public Use and Open Space-Conservation.

2. Project Impacts

The Recommended Alternative Land Use Plan is illustrated in Exhibit III-2. The discussion that follows addresses the land use impacts associated with adoption and implementation of the Recommended Alternative Land Use Map and its associated goals, policies and programs.

³ "City of Palm Desert General Plan Land Use Map," prepared by Planning/Public Works, City of Palm Desert, adopted June 22, 1995.

⁴ "City of Indio General Plan - 2020, Volume I," prepared by Chambers Group, Inc., October 1993.

Residential Land Uses

The Recommended Alternative provides for a total of 32,952± acres of residential land, which represents a decrease of about 2,802 acres, or 8.5% less than the current General Plan. Currently, there are approximately 12,141 dwelling units within the incorporated city limits. Analysis of existing development in the planning area indicates that development has not occurred at the maximum densities permitted. Therefore, for the purposes of projecting future buildout units, it has been presumed that residential development will occur at 75% of the maximum densities permitted. The proposed Plan provides for about 21,536 acres of vacant residential lands. At 75% of the maximum densities permitted, the lands could accommodate an additional 66,811 dwelling units.

Buildout of the proposed General Plan is expected to result in a total of 78,952 dwelling units, including existing and potential units. This represents an increase of about 41,923 dwelling units, or about 113%, over the number of units provided under the current General Plan. It is important to note, the substantial increase occurring within vacant residential acreage is due to the conversion of developed agricultural land to vacant low density residential lands, which is anticipated for the long term.

**Table III-2
Recommended Alternative
Residential Land Use Buildout Statistical Summary**

Land Use	Total Acres	Dev. Acres	Vacant Acres	Existing Units	Potential Units ¹	Bldout Units
VLDR Very Low (0-2 du/ac)	7,089	5,526	1,563		2,344	
LDR Low Dens. (2-4 du/ac)	22,705	3,682	19,023	11,197*	57,069	73,976
MDR Medium Dens. (4-8 du/ac)	2,313	1,752	561		3,366	
MHDR Medium-High (8-12 du/ac)	562	350	212	944**	1,908	4,976
HDR High Dens. (12-16 du/ac)	282	105	177		2,124	
Residential Subtotal	32,951	11,415	21,536	12,141	66,811	78,952

* Includes attached and detached single family housing units, as categorized by California Dept. of Finance, January 1, 2000. ** Includes multi-family housing units from two to five plus, as categorized by California Dept. of Finance, January 1, 2000. ¹ Assumes 75% of the total number of units possible, at maximum permitted density.

City of La Quinta General Plan (Recommended)

LEGEND

- Roads
- Township/Range Sections
- Railroads
- City Limits
- General Plan Planning Area
- City Sphere of Influence
- Residential Land Uses
 - VLDR Very Low Density up to 2 du/ac
 - LDR Low Density up to 4 du/ac
 - MDR Medium Density up to 8 du/ac
 - MHDR Medium-High Density up to 12 du/ac
 - HDR High Density up to 16 du/ac
 - Hillside Overlay
 - Agriculture Overlay
- Commercial Land Uses
 - M/RC Mixed Commercial
 - CC Community Commercial
 - NC Neighborhood Commercial
 - CP Commercial Park
 - O Office
 - TC Tourist Commercial
 - VC Village Commercial
- Other Land Uses
 - I Industrial
 - MC Major Community Facilities
 - P Park Facilities
 - OS Open Space
 - G Golf Course Open Space
 - W Watercourse/Flood Control
 - AP Airport
- P Floating Park Designation

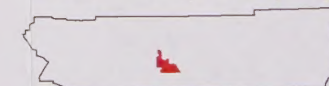
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Feet

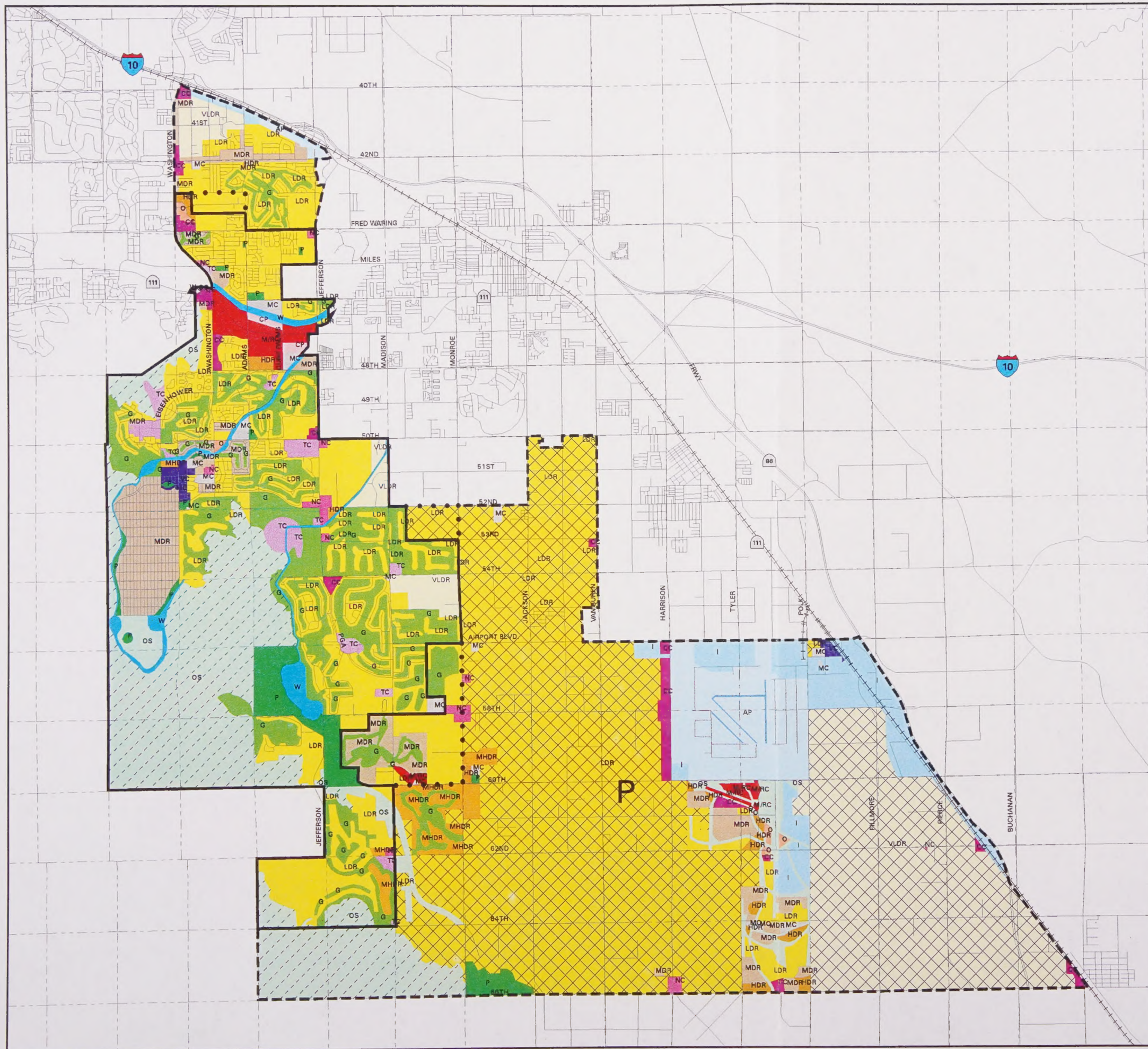
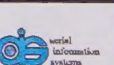
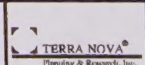


NORTH

Riverside County Vicinity Map



Map Prepared on: March 21, 2001
Map Prepared by: Aerial Information Systems
Map Version No.: 6



Under the Recommended Alternative Land Use Plan, higher density residential development is generally located in close proximity to existing or future commercial areas to facilitate convenient pedestrian, bicycle and mass transit access to professional and commercial services offered along Washington Street, Highway 111, and Eisenhower Drive. Exceptions include the approved, but not yet constructed, Travertine, Kohl Ranch and Coral Mountain developments in the southern portion of the planning area. These projects have been approved for medium and medium-high density residential development. Although they are somewhat physically removed from dense commercial areas, it is anticipated that they will serve a largely seasonal population with limited employment and professional needs. Pockets of tourist commercial and neighborhood commercial lands are in close proximity and will provide convenient shopping opportunities.

Higher density development may be subject to exterior noise levels which could result in significant impacts on residents if not adequately mitigated. These issues are addressed in detail in Section III-J, Noise.

Progressively lower residential densities are planned further from major roads and are particularly concentrated in the southeasterly portion of the planning area, where they include an agricultural overlay. The Agricultural Overlay is a new designation which recognizes the importance of agriculture in the Coachella Valley and demonstrates the City's commitment to maintaining existing agricultural land uses. Low and Very Low Density designations in this portion of the planning area are directed at maintaining the existing rural character, and will provide some assurance against undue impacts to lands which are currently, or may continue to be in cultivation.

The proposed land use densities and assignments do not appear to pose any significant land use incompatibilities with existing or planned land uses in adjacent jurisdictions. Complementary uses have been assigned by Riverside County and the surrounding cities.

Commercial Land Uses

Table III-3 describes the total acreage and commercial development potential of the proposed General Plan. For analysis purposes, it is assumed that commercial development will result in 22% building coverage.

The proposed commercial designations and permitted uses are essentially the same as those used in the current General Plan. Under the current General Plan, there are 1,624± acres designated for commercial development in the planning area. The Recommended Alternative provides for a total of 1,996.4 acres, which represents an increase of 373 acres, or a 23% increase over the current General Plan. Commercial lands are located primarily along the Highway 111 corridor, Washington Street, Eisenhower Drive, and Harrison Street near the Desert Resorts Airport. The proposed Plan also provides for Tourist Commercial development at a number of other scattered locations, particularly those associated with existing and planned residential resort communities in the southeasterly portion of the City.

Table III-3
Recommended Alternative
Commercial Land Use Buildout Statistical Summary

	Total Acres	Dev. Acres	Vacant Acres	Existing Sq.Ft.*	Future Sq.Ft.*	Total Sq.Ft.*
M/RC Mixed Commercial	520	197	323	1,887,890	3,095,374	4,983,264
CC Community Commercial	484	288	196	2,759,962	1,878,307	4,638,269
NC Neighborhood Commercial	204	137	67	1,312,898	642,074	1,954,972
CP Commercial Park	64	0	64	0	613,325	613,325
O Office	84	44	40	421,661	383,328	804,989
TC Tourist Commercial	507	328	179	3,143,290	1,715,393	4,858,683
VC Village Commercial	134	90	44	862,488	421,661	1,284,149
Commercial Subtotal	1,997	1,084	913	10,388,189	8,749,462	19,137,651

* Assumes 22% lot coverage.

Industrial Land Uses

Approximately 1,360 acres in the planning area are designated for industrial development under the current General Plans. The proposed Plan provides for a total of 1,947± acres of industrial development, which accounts for 587± more acres than are provided under the current General Plans, or an increase of about 43%. Under the proposed Plan, these additional industrial acres are located at the extreme eastern edge of the planning area, east of Highway 111 near Thermal.

Under the current General Plan, there are no industrial lands located within the City limits, but there are four industrial land use categories assigned to Riverside County lands. The proposed Plan introduces a single industrial category, which provides for a variety of industrial uses in the planning area, including business parks, light manufacturing operations, and warehousing and distribution facilities.

The following table indicates the total acreage and industrial development potential of the proposed General Plan. It assumes that industrial development will result in an average of 34% building coverage, which includes buildings and other ancillary structures.

**Table III-4
Recommended Alternative
Industrial Land Use Buildout Statistical Summary**

Land Use	Total Acres	Dev. Acres	Vacant Acres	Existing Sq. Ft.*	Potential Sq. Ft.*	Bldout Sq. Ft.*
I Industrial	1,947	1,199	748	17,757,670	11,078,179	28,835,849

* Assumes 34% lot coverage.

Public/Quasi-Public Land Uses

Public/quasi-public lands are those currently supporting or planned for future major community facilities (MC), including schools, fire stations, governmental offices, and substations. Lands designated for airport uses (AP) are also included in this category. The Bermuda Dunes Airport is located immediately south of Interstate-10, west of Jefferson Avenue, and the Desert Resorts Airport, formerly known as the Thermal Airport, is located south of Airport Boulevard, between Harrison and Polk Streets.

Table III-5 describes the acreage dedicated to Public and Quasi-Public land uses under the proposed General Plan. The proposed Plan provides for a total of 2,483± acres of public/quasi-public facilities, which represents an increase of 79 acres (about 3%) over the current General Plan.

**Table III-5
Recommended Alternative
Public/Quasi-Public Use Buildout Statistical Summary**

Land Use	Total Acres	Developed Acres	Vacant Acres
MC Major Community Facility	299	239	60
AP Airport	2,184	560	1,624
Public/Quasi-Public Subtotal	2,483	799	1,684

Open Space Land Uses

Open Space land use designations are assigned to those lands which constitute an important or valuable natural resource and warrant protection. These include parks, golf courses, watercourses and floodways and mountainous areas. In the Recommended Alternative Land Use Map, Open Space lands are generally concentrated within the foothills of the Santa Rosa and Coral Reef Mountains. Substantial open spaces also occur within the Lake Cahuilla County Park, Fish Traps Park, the Coachella Valley Stormwater Channel, and numerous golf courses within planned resort residential communities. Like the current General Plan, the proposed Plan applies a Hillside Overlay to lands occurring above the toe of slope of the Santa Rosa and Coral Reef Mountains.

Development in these areas may occur, but only when in strict conformance with the City's Hillside Conservation Zone Ordinance. Application of the Hillside Overlay will contribute to the preservation of the mountains and will help limit potential impacts associated with continued urbanization.

Open Space land use designations and acreages are provided in the following table. The proposed General Plan provides for approximately 14,120 acres of Open Space, which represents an increase of 1,763± acres (14%) over the current Plans. These additional Open Space lands are generally located in the approved, but yet undeveloped golf course resort developments, which are not designated as Open Space in the current General Plans.

**Table III-6
Recommended Alternative
Open Space Land Use Buildout Statistical Summary**

Land Use	Total Acres	Developed Acres	Vacant Acres
P Park Facilities	922	795	127
OS Open Space	7,902	1,713	6,189
G Golf Course	4,694	3,624	1,070
W Watercourse	602	469	133
Open Space Subtotal	14,120	6,601	7,519

Summary of Impacts

Impacts within the City of La Quinta and on surrounding lands resulting from adoption and implementation of the proposed General Plan are not expected to be significant. No substantial incompatibilities with internal or external land uses are expected to result from the proposed land use plan. The Plan recognizes the importance of agriculture to the Coachella Valley and is directed at maintaining the rural character of the southeasterly portion of the planning area. The Plan is also responsive to the need to preserve the Santa Rosa and Coral Reef Mountains as undeveloped open space.

The potential for traffic noise impacts on existing, approved and/or proposed residential lands is reduced by General Plan policies and programs which address noise mitigation measures along major roadways, but additional mitigation measures may be necessary to reduce impacts to acceptable or insignificant levels (also see Section III-J).

Proposed Annexation No. 12

As described in Section I of this EIR, the City is considering annexation of a portion of the General Plan planning area and extension of its sphere of influence. In order to streamline the environmental review process, analysis of these areas is included in this General Plan EIR. If the annexation proceeds, this EIR will serve as the environmental compliance document for subsequent annexation actions.

As illustrated in Exhibit I-3, the proposed annexation area is located in the southeasterly portion of the planning area and is generally bounded by 52nd Avenue on the north, 62nd Avenue on the south, Jackson Street on the east, and the existing city limits on the west. The annexation area totals approximately 5,420 acres and currently contains primarily vacant desert lands and large lot residential development, including ranches, a residential subdivision surrounding a golf course, and other scattered residential development. Approximately 4,160 acres (77%) in the proposed annexation area are developed, while the remaining 1,260 acres (23%) are vacant. According to the 2000 U.S. Census, the population of the annexation area is approximately 639 residents. Assuming an average household size of 2.75 persons per household, the annexation area currently contains an estimated 232 dwelling units, all of which are presumed to be single-family units.

Approximately 70% of the annexation area (3,782 acres) is currently designated for Agriculture and Very Low Density Residential (3A and 3B), with a maximum density of 2 dwelling units per acre, in the existing Riverside County General Plan. The remainder of the annexation area is assigned a mix of land use designations, including low to high density residential, golf course open space, mixed commercial, park facilities, and major community facilities. Two school sites and a park, totaling 40 acres and 10 acres, respectively, are located within the proposed annexation area. The Coral Mountain Specific Plan project is located in the southwestern corner of the annexation area. This project has been approved by Riverside County for medium to high density (8 to 12 units per acre) residential, golf course, and limited commercial development, but is not yet developed.

Should Annexation No. 12 be approved, lands within the annexation area would be under the jurisdiction of the City of La Quinta. In preparation for this, the City has assigned its own General Plan and zoning designations to the area, as shown in Exhibit III-3. The following table provides a breakdown of the proposed General Plan land use designations and potential development levels at buildout.

The first of the two papers is by Mr. J. H. R. Taylor, and is entitled 'On the question of the origin of the human race'. It is a very interesting and well-written paper, and contains a great deal of valuable information. The second paper is by Mr. J. H. R. Taylor, and is entitled 'On the question of the origin of the human race'. It is a very interesting and well-written paper, and contains a great deal of valuable information.

The third paper is by Mr. J. H. R. Taylor, and is entitled 'On the question of the origin of the human race'. It is a very interesting and well-written paper, and contains a great deal of valuable information. The fourth paper is by Mr. J. H. R. Taylor, and is entitled 'On the question of the origin of the human race'. It is a very interesting and well-written paper, and contains a great deal of valuable information.

The fifth paper is by Mr. J. H. R. Taylor, and is entitled 'On the question of the origin of the human race'. It is a very interesting and well-written paper, and contains a great deal of valuable information. The sixth paper is by Mr. J. H. R. Taylor, and is entitled 'On the question of the origin of the human race'. It is a very interesting and well-written paper, and contains a great deal of valuable information.

The seventh paper is by Mr. J. H. R. Taylor, and is entitled 'On the question of the origin of the human race'. It is a very interesting and well-written paper, and contains a great deal of valuable information. The eighth paper is by Mr. J. H. R. Taylor, and is entitled 'On the question of the origin of the human race'. It is a very interesting and well-written paper, and contains a great deal of valuable information.

Exhibit III-3 City of La Quinta Annexation Area and Sphere of Influence Amendment General Plan & Zoning

LEGEND

Roads

Township/Range Sections

City Limits

Proposed Annexation Area

Proposed Sphere of Influence Area

Residential Land Uses

- GP = LDR (Low Density)
- ZN = RL (Low Density Residential District)
- GP = MDR (Medium Density)
- ZN = RM (Med. Dens. Residential Dist.)
- GP = MHDR (Medium-High Density)
- ZN = RMH (Med. High Dens. Res. Dist.)
- GP = HDR (High Density)
- ZN = RH (High Density Residential Dist.)

Agriculture Overlay

Commercial Land Uses

- GP = M/RC (Mixed Commercial)
- ZN = CR (Regional Commercial District)
- GP = NC (Neighborhood Commercial)
- ZN = CN (Neighborhood Comm. Dist.)

Other Land Uses

- GP = MC (Major Community Facilities)
- ZN = MC (Major Community Fac. Dist.)
- GP = P (Park)
- ZN = PR (Parks and Recreation Dist.)
- GP = OS (Open Space)
- ZN = OS (Open Space District)
- GP = G (Golf Course Open Space)
- ZN = GC (Golf Course District)

P Floating Park Designation

Scale
1:72,000

0 1,500 3,000 4,500
Feet



NORTH

Riverside County Vicinity Map



Map Prepared on: April 10, 2001

Map Prepared by: Aerial Information Systems

Map Version No.: 6



Table III-7
Annexation No. 12
Land Use Buildout Statistical Summary

Recommended General Plan Land Use Designation	Total Developed Acres	Acres	Vacant Acres	Existing Units	Potential Units¹	Bldout Units
LDR Low Density (2-4 du/ac)	580.62	357.99	222.63		667	
LDR Low Density w/Ag. Overlay	3,279.62	2,700.22	579.40	232*	9,238	10,912*
MDR Med. Density (4-8 du/ac)	323.47	194.15	129.32		775	
MHDR Med-High Dens (8-12 du/ac)	464.80	336.34	128.46	0**	1,156	1,313**
HDR High Density (12-16 du/ac)	20.33	7.18	13.16		157	
Residential Subtotal	4,668.84	3,595.88	1,072.97	232	11,993	12,225
	Total Developed Acres	Acres	Vacant Acres	Existing SqFt²	Future SqFt²	Bldout SqFt²
NC Neighborhood Commercial	58.89	56.43	2.45	540,780	23,479	564,259
M/RC Mixed Regional Commercial	39.91	39.91	0	382,465	0	382,465
Commercial Subtotal	98.80	96.34	2.45	923,245	23,479	946,724
MC Major Community Facilities	42.43	31.72	10.71	—	—	—
G Golf Course Open Space	555.33	428.87	126.46	—	—	—
OS Open Space	44.50	0	44.50	—	—	—
P Park Facilities	10.01	7.18	2.83	—	—	—
Open Space Subtotal	609.84	436.05	173.79	--	--	--
Total	5,419.91	4,159.98	1,259.93	--	--	--

* Includes attached and detached single-family units, as derived from 2000 U.S. Census data. Also assumes that 2,500 of the acreage currently in agriculture will develop as low density residential.

** Includes multi-family housing units.

1 Assumes 75% of the total number of units possible, at maximum densities permitted.

2 Assumes 22% lot coverage at buildout.

Source: Aerial Information Systems, April 2001; estimates by Terra Nova Planning & Research

Upon annexation into the City, the existing rural character of the annexation area is expected to be preserved for the near-term. As shown in the table above, the City proposes to designate approximately 60% of the annexation area (3,280 acres) for Low Density Residential development with an Agricultural Overlay. Within this designation, land may be developed at a maximum density of 4 dwelling units per acre, and all existing agricultural land uses may continue until such time as the landowner chooses to develop. Under the proposed land use plan, approximately 11% of the annexation area is designated for Low Density Residential development (without an Agricultural Overlay); 10% is designated for Golf Course Open Space; 9% is designated for Medium High Density Residential; and 6% is designated for Medium Density Residential. The remaining 4% of the annexation area is designated for a mix of commercial uses, major community facilities, open space and park facilities.

As development occurs, the character of the annexation area will change from that of a rural region to a more urban community, particularly if agricultural lands are converted to low-density residential development. Under the proposed densities, the annexation area could accommodate approximately 9,238 new dwelling units. This assumes that all vacant residential lands, including those with an Agricultural Overlay, will be developed with urban uses, and buildout will occur at a rate of 75% of the maximum densities permitted. It also assumes that 2,500 of those acres currently in agriculture will be converted to low density residential land uses. When combined with existing dwelling units, buildout of the annexation area could contain a total of 12,225 dwelling units. 10,912 of these are estimated to be single-family units, and 1,313 are expected to be multi-family units.

The annexation area also contains 2.45 acres of vacant Neighborhood Commercial land. Assuming 22% lot coverage at buildout, these lands could accommodate approximately 23,478 square feet of new commercial development. When combined with existing square footage, buildout of the annexation area could result in a total of about 946,724 square feet of commercial development. These estimates are part of the development described in Tables III-2 and III-3, which estimate future buildout levels in the entire General Plan planning area.

Other vacant acres in the annexation area designated for a wide range of uses and are not expected to result in the development of substantial square footage. The annexation area contains 10.71 acres of vacant land designated for Major Community Facilities. These lands can accommodate a wide range of public service facilities, such as civic centers, schools, fire stations, and electrical substations. Other vacant acres in the annexation area are designated for Golf Course Open Space, Open Space, and Park Facilities, and any structures developed on these sites are expected to be limited to golf courses, clubhouses and recreational facilities.

The proposed land use pattern for Annexation No. 12 is designed to complement existing and planned development patterns. The construction of potential new dwelling units in the area is not expected to result in significant land use incompatibilities, but will contribute to increased traffic volumes, increased demand for public services, and other environmental impacts, which are addressed throughout Section III of this EIR. In addition, noise, aesthetic and other incompatibilities may occur where agricultural and urban lands are adjacent to one another. These issues are evaluated in Section III-B, which specifically addresses Agricultural Resources in the planning area.

Proposed Sphere of Influence Amendment

The proposed sphere of influence (SOI) amendment area consists of approximately 8,205 acres bounded by Avenue 50 on the north, Jackson Street on the west, Avenues 62 and 66 on the south, and Polk, Harrison and Van Buren Streets on the east. The proposed sphere of influence area is depicted in Exhibit I-3.

Land within the proposed SOI is currently under the jurisdiction of Riverside County and is primarily designated for Agriculture, with the exception of small pockets of land designated for residential (3A and 2B) development in the northernmost portion of the area. Small areas of Commercial and Manufacturing designated lands are also part of the SOI amendment area, as is the Kohl Ranch Specific Plan in the southeastern corner. The Kohl Ranch Specific Plan has been approved by Riverside County, but has not yet been developed. It includes lands designated for low, medium, and high-density development, as well as commercial, industrial, and open space land uses. According to the 2000 U.S. Census, the SOI amendment area contains a population of approximately 2,304 residents. With an average household size of 2.75 persons per household, there are an estimated 837 existing dwelling units in the SOI amendment area, all of which are presumed to be single-family units.

Approval of the proposed SOI amendment would not result in any significant adverse environmental impacts to lands within the SOI or its vicinity. The SOI amendment would be an administrative action that would provide the City with a greater degree of involvement in urban development occurring within the SOI. Lands within the SOI would remain under the jurisdiction of Riverside County, and the existing land use designations assigned by the Riverside County General Plan would remain in effect. The County would be responsible for notifying the City of La Quinta of pending development cases, so that the City could stay abreast of development trends and issues in the SOI.

However, if the proposed SOI area is annexed into the City in the future, the area would be under the City's jurisdiction, and the City would be responsible for assigning land use designations. Proposed General Plan land use and zoning designations for the SOI amendment area are shown on Exhibit III-3. A breakdown of proposed SOI land use designations and projected buildout levels are provided in the following table. Potential impacts associated with buildout of the SOI and the entire planning area are evaluated throughout Section III of this EIR.

**Table III-8
Sphere of Influence Amendment
Land Use Buildout Statistical Summary**

Recommended General Plan Land Use Designation	Total Developed Acres	Total Developed Acres	Vacant Acres	Existing Units	Potential Units¹	Bldout Units
VLDR Very Low/Ag Overlay(0-2 du/ac)	68.45	67.48	0.97		1	
LDR Low Density (2-4 du/ac)	429.61	218.63	210.98		632	
LDR Low Density w/Ag. Overlay	5,650.63	5,011.00	639.63	837*	16,318	18,389*
MDR Med. Density (4-8 du/ac)	459.08	358.81	100.27		601	
HDR High Density (12-16 du/ac)	164.85	93.67	71.18	0**	854	854**
Residential Subtotal	6,772.62	5,749.59	1,023.03	837	18,406	19,243
	Total Developed Acres	Total Developed Acres	Vacant Acres	Existing SqFt²	Future SqFt²	Bldout SqFt²
CC Community Commercial	244.14	211.81	32.33	2,029,817	309,824	2,339,64
M/RC Mixed Regional Commercial	83.40	69.12	14.28	662,391	136,848	799,239
O Commercial Office	43.72	43.72	0	418,977	0	418,977
Commercial Subtotal	371.26	324.65	46.61	3,111,185	446,672	3,557,857
Industrial	383.55	323.08	60.47	4,784,944	895,584	5,680,528
MC Major Community Facilities	36.67	0	36.67	—	—	—
OS Open Space	640.95	492.91	148.04	—	—	—
Total	8,205.04	6,890.24	1,314.80	--	--	--

* Includes attached and detached single-family units, as derived from 2000 U.S. Census data. Also assumes that at buildout, 4,800 of the acreage currently in agriculture would develop as low density residential.

** Includes multi-family housing units.

1 Assumes 75% of the total number of units possible, at maximum densities permitted.

2 Assumes 22% lot coverage for commercial development, and 34% lot coverage for industrial.

Source: Aerial Information Systems, April 2001; estimates by Terra Nova Planning & Research

If the SOI area is annexed into the City, the above described land use designations would be implemented. The proposed SOI contains approximately 1,023 vacant acres designated for residential development under the proposed land use plan. In addition, it is assumed that the majority of those lands currently in agriculture would be converted to low density residential land uses. Buildout of the area would be expected to result in the development of approximately 16,318

new dwelling units. This assumes that all residential lands would develop at a rate of 75% of the maximum densities permitted. When combined with the number of existing dwelling units in the SOI amendment area, this yields approximately 19,243 dwelling units at area buildout.

The SOI amendment area also contains vacant lands designated for commercial development under the proposed land use plan. Approximately 32 vacant acres and 14 vacant acres are designated for Community Commercial and Mixed Regional Commercial uses, respectively. Assuming 22% lot coverage for commercial lands at buildout, the SOI area could accommodate a total of about 3,557,857 square feet of commercial development. The SOI amendment area also includes about 60 vacant acres designated for Industrial development. Assuming 34% lot coverage for industrial lands at buildout, the SOI area could accommodate approximately 5,680,528 square feet of industrial development. These buildout estimates are included in Tables III-2, III-3, and III-4, which describe future buildout levels in the entire General Plan planning area.

The SOI amendment area also includes vacant acres designated for Major Community Facilities and Open Space under the proposed land use plan. Because the Major Community Facilities designation permits the development of a wide range of public facilities, it is difficult to anticipate how these lands will be developed in the future, and what, if any buildings will be constructed on them. Lands designated for Open Space will remain undeveloped.

Buildout of the sphere of influence amendment area is not expected to result in significant land use incompatibilities, but noise, odor, visual and other incompatibilities may occur where agricultural and urban lands are adjacent to one another. These issues are evaluated in Section III-B, which specifically addresses Agricultural Resources in the planning area. Other potential impacts are addressed throughout Section III of this EIR.

3. Mitigation Measures

Inasmuch as no significant land use incompatibilities are expected to result from the adoption and implementation of the La Quinta General Plan, no mitigation measures are needed to address this area of concern. However, the following shall be implemented to assure that potential impacts are adequately assessed. In addition, mitigation measures addressing specific issues associated with agricultural lands are included in Section III-B, below.

- A. Individual project proposals, especially those involving a mix of residential and other uses, as well as those in close proximity to sensitive land uses, shall be fully assessed during the project review process to assure that all land use compatibility issues are addressed and mitigated, if necessary.
- B. All future residential development occurring on lands within an existing 65 dBA or higher noise contour shall be required to prepare a noise impact assessment and mitigation plan which minimizes impacts to outdoor living space and assures a maximum interior noise level of 45 CNEL.

Mitigation Monitoring/Reporting Program

- A. The City shall identify potential adverse of unacceptable noise exposures, analyze and assure the efficacy of mitigation programs, and assure construction is in accordance with the approved noise mitigation plan. Said plan shall be approved by the Community Development Department as part of its review, and the efficacy of the mitigation plan shall be demonstrated as part of the Building Department's inspection process. Results shall be recorded and maintained with building inspection records.

Responsible Parties: City Community Development and Building Departments

B. Agricultural Resources

1. Existing Conditions

Agriculture was the dominant economic activity of the Coachella Valley during the first half of the twentieth century. The region's main agricultural staple, the date palm, was introduced around the turn of the century by the U.S. Department of Agriculture, and agricultural activity soon expanded to include the cultivation of citrus, grapes, and other fruit and vegetable crops.

Although agriculture continues to be an important component of the Coachella Valley economy, other industries have spread throughout the valley and transformed the region into a world-class resort residential community. Starting in the 1920s, equestrian camps and resort hotels, including the La Quinta Hotel, were constructed throughout the Valley. By the 1930s, the character of the region was steered toward the budding resort industry, with the marketing and construction of "weekend homes" in the La Quinta Cove and elsewhere in the Valley. The post World War II period saw a new era of development that eventually gave the region its predominant image as a destination resort community, characterized by high quality, planned residential golf course developments.

Despite the significant level of urban growth that has occurred in the planning area over the past century, the contrast between different settlement patterns in the planning area has persisted to some degree. While most lands within the City core are representative of a low-density resort residential community, the easterly portion of the planning area remains largely rural and characterized by agriculture, open space, and scattered residential and commercial development.

Existing Agricultural Land Uses in the Planning Area

The General Plan planning area contains approximately 19,938 acres of land currently designated for agricultural land uses. These lands are generally concentrated east of Monroe Avenue and south of 52nd Avenue (see Exhibit III-1). All lands designated for agricultural purposes are currently under the jurisdiction of Riverside County. The Riverside County General Plan designates them for Agricultural (AG) development, a designation which permits agricultural cultivation, associated uses (including limited commercial, industrial, and single-family residential development at a maximum density of one dwelling unit per ten acres), and open space. Approximately 16,152 acres (81%) of land designated for agricultural uses in the planning area are currently developed, and 3,786 acres (19%) are vacant.

Agricultural Land Classifications

The Riverside County General Plan includes an Agricultural Resources Map, which classifies important agricultural lands based on soil characteristics, climatic conditions, and water supply.⁵ The four classifications are consistent with those used by state and federal agencies and include: 1) prime farmland, 2) statewide important farmland, 3) unique farmland, and 4) local important farmland. According to the Agricultural Resources Map, the planning area contains prime farmland and statewide important farmland, which are described below.

According to the Riverside County General Plan Agricultural Resources Map, an estimated 26,312 acres of prime farmland occur within the planning area. Prime farmland is land with the best physical characteristics to sustain the long-term production of agricultural crops. According to the Riverside County General Plan, it is “best suited for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses.” The land may be used as cropland, pastureland, forestland, rangeland, or other related uses, but may not contain urban development or a major water source. When treated and managed according to modern farming methods, prime farmland has the ability to sustain high yields of crops economically.

The Agricultural Resources Map also indicates that the planning area contains an estimated 2,345 acres of statewide important farmland. Statewide important farmland has “a good combination of physical and chemical characteristics for producing food, forage, fiber and oilseed crops and is available for these uses.”⁶ These lands may include cropland, pastureland, rangeland, forestland or other related uses, but may not include a major water source or urban development.

The County Agricultural Resources Map, therefore, indicates that a combined total of 28,657 acres of prime farmland and farmland of statewide importance occur within the planning area. However, this figure overstates the amount of important farmland that is actually available for agricultural purposes in the planning area. Since the Agricultural Resources Map was prepared, some of these acres have been converted to, or approved for urban, non-agricultural purposes (such as low density residential, golf course, airport, manufacturing and commercial uses), and are no longer available for agricultural uses.

The Desert Resorts Airport, for example, is shown as containing prime and statewide important agricultural land on the Agricultural Resources Map, but contains approximately 2,240 acres of developed or dedicated airport land. The construction of The Village at the Palms residential golf course development, at the southwest corner of Airport Boulevard and Monroe Street, has already resulted in the urbanization of another 200 acres of prime farmland.

The Coral Mountain Specific Plan, a residential golf course development located between 58th and 62nd Avenues adjacent to the La Quinta city limits, has been approved by Riverside County but not

⁵ Exhibit VI.34, Riverside County Comprehensive General Plan, prepared by the Riverside County Planning Department, adopted March 6, 1984 and revised June 3, 1993.

⁶ p. 380, Riverside County Comprehensive General Plan, prepared by the Riverside County Planning Department, adopted March 6, 1984 and revised June 3, 1993.

yet constructed. Approximately two-thirds of the site, or about 855 acres, is classified as prime agricultural land on the County's Agricultural Resources Map. These lands have already been approved for future urban uses and, therefore, will not be available for agricultural purposes. Kohl Ranch, immediately south of the Desert Resorts Airport and extending south to 66th Avenue, has also been approved by the County for mixed-use development. The construction of this project will result in the conversion of approximately 2,240 acres of prime farmland and farmland of statewide importance to urban, non-agricultural purposes.

The Desert Resorts Airport, The Village at the Palms, Coral Mountain, and Kohl Ranch account for a combined estimated total of 5,535 acres of land, which can no longer be classified as prime farmland or farmland of statewide importance. Urbanization of these lands reduces the amount of important agricultural land in the planning area to about 23,122 acres. Additional unquantified acres, which are shown as important agricultural land on the Agricultural Resources Map are also designated for non-agricultural purposes in the County General Plan and, therefore, are not available for cultivation.

The projects described above illustrate the urbanization trend that is occurring in the easterly planning area. Nonetheless, this area still contains a substantial amount of land designated as prime farmland or farmland of statewide importance. The potential impacts of the Recommended General Plan on these agricultural resources are addressed in the Project Impacts discussion below.

Williamson Act Contracts

The California Land Conservation Act, better known as the Williamson Act, is a voluntary program used statewide for agricultural land preservation. It was enacted in 1965 to encourage farmers and ranchers to keep their properties in agriculture and to discourage the premature loss of farmland to urban development.

Under the Williamson Act, a participating landowner is required to commit his land to agriculture or open space for at least ten years. In return, he is taxed at a lower property tax rate, which is based on the actual use of the land for agricultural production rather than its current market value. In an effort to partially compensate for property tax reductions that result from participation in the Williamson Act, the State pays each participating city and county an annual payment based on the amount and quality of land enrolled in the program.

The County of Riverside participates in the Williamson Act and requires 100 contiguous acres of agricultural land under one or more ownerships to file an application for agricultural preserve status with the Riverside County Planning Department. Once an agricultural preserve has been approved by the County, it is restricted to agricultural and compatible uses, but may be subject to agricultural rezoning. The life of the contract between the landowner and County is ten years. The landowner may renew the contract, allow it to expire and remove the property from its agricultural preserve status, or petition the County for the cancellation of the contract. There are currently a total of 5,411.99 acres of land under Williamson Act contracts within the planning area.

2. Project Impacts

Land Use Impacts

The Recommended General Plan assigns Low (LDR) and Very Low Density Residential (VLDR) land use designations to lands currently designated for agricultural uses under the existing County General Plan, and introduces an Agricultural Overlay designed to preserve agricultural uses to the extent desired by landowners. Lands within the Agricultural Overlay will be allowed to continue cultivation as under the existing General Plan, until such time as the landowner chooses to develop. The Agricultural Overlay demonstrates the City's commitment to maintaining existing agricultural uses, while also providing opportunities for development of these lands.

Under the existing Riverside County General Plan, approximately 19,938 acres are designated for agricultural land uses. Under the Recommended General Plan, a total of 17,615 acres are included in the Agricultural Overlay. The proposed land uses and coverage area of the Agricultural Overlay are illustrated in Exhibit III-2. A comparison of existing and proposed agricultural acreages is provided in the table below.

**Table III-9
Agricultural Land Use Statistical Summary
Existing vs. Recommended General Plans**

Land Use Designation	Developed Acres	Vacant Acres	Total Acres
Existing County General Plan			
(AG) Agriculture	16,152	3,786	19,938
Recommended City General Plan			
(VLDR) Very Low Density Resid w/Ag. Overlay	5,079	1,201	6,280
(LDR) Low Density Resid w/Ag. Overlay	8,476	2,859	11,335
Total Agricultural Overlay:	13,555	4,060	17,615

As shown in the table above, under the Recommended General Plan, approximately 6,280 acres are designated for Very Low Density Residential (VLDR) development with an Agricultural Overlay. This designation provides for large lot single-family development, with densities up to 2 dwelling units per acre. The Agricultural Overlay provides for the continuation of existing agricultural activity at the discretion of the landowner. This land use designation provides a transition between agricultural lands and more intense urban uses and promotes a progression of compatible land uses. It is assigned to lands in the easternmost portion of the planning area, including those generally east of Polk Street and south of 58th Avenue.

The Recommended General Plan designates approximately 11,335 acres for Low Density Residential (LDR) development with an Agricultural Overlay. This designation is the most prevalent in the easterly portion of the planning area and is applied to lands generally south of Airport Boulevard, between Monroe and Tyler Streets. It supports the development of single-family attached and detached residences, with densities up to 4 units per acre. Development may occur within a country club or standard subdivision, and clustering of condominiums or town homes may be appropriate when governed by a Specific Plan and provided with common area amenities and open space. The Agricultural Overlay allows existing agricultural operations to continue, until such time as the landowner chooses to develop.

As described above, the existing General Plan designates a total of 19,938 acres for Agricultural development. Under the Recommended Alternative, 17,615 of these acres are included within the Agricultural Overlay. It is difficult to anticipate whether and to what extent these lands would actually be converted to residential uses in the future, as the decision to do so will be left to individual landowners. Due to the application of the Agricultural Overlay, implementation of the Recommended General Plan will not directly result in the conversion of prime farmland or farmland of statewide importance to residential uses, but it will provide an opportunity for this conversion to take place without requiring a General Plan or zoning amendment or other administrative approval. Similarly, for lands covered by the Agricultural Overlay, the Recommended General Plan will not directly cause the cancellation of any contract made pursuant to the Williamson Act, but it could provide the ability for landowners to cancel their contracts if they choose to develop.

The remaining 2,323 acres, which are currently designated for Agricultural uses in the County General Plan, are not included in the proposed Agricultural Overlay. These lands generally occur immediately adjacent to existing City limits, and in the Coral Mountain and Kohl Ranch Specific Plans, and most are classified as prime farmland, with a smaller portion classified as farmland of statewide importance. Under the Recommended Plan, these lands are designated for Low Density Residential development (LDR), with densities up to 4 units per acre. They would not remain in cultivation if the Recommended General Plan is implemented. Adoption of the Recommended General Plan would result in the complete conversion of these lands from agricultural to non-agricultural purposes, and would require the cancellation of any Williamson Act contracts currently in effect on these lands. These lands are, however, part of the proposed Annexation No. 12 and sphere of influence (SOI) amendment, which are discussed below. If the proposed annexation and SOI amendment are approved, these lands would be covered by the Agricultural Overlay, and any existing agricultural operations could remain intact.

Indirect Environmental Impacts

The conversion of agricultural and open space lands to low-density residential uses could result in a wide range of indirect environmental impacts. While it is impossible to anticipate the rate at which the future conversion of agricultural lands to urban uses could occur, implementation of the Recommended Land Use Plan could facilitate the development of a substantial number of new dwelling units in the easterly portion of the planning area. The anticipated number of dwelling units facilitated by the Recommended Plan is discussed in Section III-A of this EIR. Land use incompatibilities may occur where agricultural lands are adjacent, or in close proximity to low-density residential development. Farmers and ranchers may be exposed to increased noise associated with household mechanical equipment and traffic generated by new residences. Residents of low-density developments may be exposed to operational noise generated by farm equipment, odors from farm animals and organic or chemical crop applications, and airborne sand and/or dust generated by plowing and harvesting activities.

Depending upon the level of development that actually occurs on lands currently designated for agriculture, the existing aesthetic character of the easterly portion of the planning area will be transformed from a rural, agrarian region with vast amounts of open agricultural activities, to a low-density residential urban environment. Open spaces will be reduced, and views of natural terrain and vegetation may be obstructed by buildings, signs, utility infrastructure, and other man-made improvements. Other aesthetic impacts are likely to include increased light and glare associated with buildings, signs, streetlights, and automobiles.

Related to this is the associated increase in energy usage and consumption of non-renewable resources, which will be demanded by new development, as well as the need for and costs of providing additional urban services, such as domestic water and sewer facilities, schools and libraries, and fire and police protection. These issues, as they relate to buildout of the entire planning area, are addressed in detail in Section III-L (Public Services and Facilities) and Section III-F (Water Resources).

The urbanization of agricultural lands will also result in increased traffic volumes on roads within and outside the planning area, particularly in the easterly portion of the planning area, and may require the construction of intersection or roadway improvements to facilitate additional traffic. Conflicts between automobiles and farm equipment on roadways may become more prevalent, and air travel activity at the Desert Resorts Airport could expand to serve the growing population. Anticipated increases in traffic volumes and vehicle miles traveled will contribute to an associated increase in air pollution in the planning area and Coachella Valley. These issues are addressed in more detail in Sections III-C (Traffic/Circulation) and III-H (Air Quality).

The conversion of agricultural lands to urban development will also result in the replacement of permeable soils with impervious surfaces, such as streets, sidewalks and driveways. These surfaces will generate increased runoff and redirect existing flows, and may require the construction and/or expansion of storm water management improvements. Flooding and hydrology issues are addressed in more detail in Section III-E.

The conversion of agricultural lands to urban uses could also result in limited, but potentially positive environmental impacts. As illustrated in Exhibit III-18, the easterly portion of the planning area is subject to moderate to extreme wind erosion hazards. The construction of buildings, paving of streets, and stabilization of soils with urban landscaping materials, may reduce the severity of wind erosion hazards in the area. Agricultural activities typically offer only marginal, if any, wildlife habitat, and apply fertilizers, pesticides and other chemicals, which can harm or kill wildlife. Low-density residential development is likely to include landscape treatments and common areas that could enhance habitat for birds and small mammals. These and other potential impacts are addressed throughout Section III of this EIR. Potential growth-inducing impacts are discussed in Section VIII.

Proposed Annexation No. 12

The proposed annexation and sphere of influence (SOI) amendment areas are located in the southeasterly portion of the planning area, where agricultural lands predominate. Approximately 3,782 acres (70%) in the proposed annexation area are currently designated for Agriculture/Very Low Density Residential development by the Riverside County General Plan, and about 3,032 of these are developed.

Upon annexation into the City, new General Plan and zoning designations would be assigned to lands in the annexation area (see Exhibit III-3). The proposed land use pattern is designed to complement existing and planned land uses, and it designates approximately 3,280 acres (61%) in the annexation area for Low Density Residential development with an Agricultural Overlay. Any agricultural land use within this overlay area will be allowed to continue until such time as the landowner chooses to develop. Residential development with a maximum density of 4 dwelling units per acre will also be permitted.

The remaining 503 acres currently designated for Agriculture/Very Low Density Residential uses under the Riverside County General Plan, are designated for Low Density Residential development (up to 4 du/ac) under the proposed land use plan, and are not covered by the Agricultural Overlay. These lands are generally located west of Monroe Street between 58th and 60th Avenues, and would be lost to potential agricultural uses.

Proposed Sphere of Influence Amendment

Approximately 5,651 acres (69%) of the proposed SOI area are designated for Agriculture/Very Low Density Residential development under the existing Riverside County General Plan. If the SOI amendment is approved, these lands would continue to be under the jurisdiction of Riverside County, and the existing land use designations would continue to be in effect. The City of La Quinta, however, would be notified of development proposals in the SOI area and play a greater role in monitoring its development trends.

If the SOI area is annexed into the City in the future, the land use designations assigned by the City (see Exhibit III-3) would be implemented. Under the proposed SOI land use plan, approximately 5,651 acres are designated for Low Density Residential (up to 4 du/ac) with an Agricultural Overlay, and about 68 acres are designated for Very Low Density Residential (up to 2 du/ac) with

an Agricultural Overlay. This accounts for a total of 5,719 acres, which would be covered by the Agricultural Overlay in the SOI. Compared to the existing General Plan, this accounts for an increase of about 68 acres of land that could potentially be used for agricultural purposes.

3. Mitigation Measures

Implementation of the Recommended Land Use Plan and Annexation No. 12 could result in the conversion of prime farmland and farmland of statewide importance to urban land uses, and could result in the cancellation of Williamson Act contracts on lands in the easterly portion of the planning area. Inasmuch as these actions could result in potential adverse environmental impacts, the following mitigation measures shall be implemented. Even with implementation of mitigation measures, the impacts associated with long term loss of prime agricultural lands will be significant.

- A. An Agricultural Overlay shall be applied to lands in the easterly portion of the planning area, as illustrated in Exhibit III-2 and III-3. Any agricultural land use within this overlay area shall be allowed to continue until such time as the landowner chooses to develop. Agricultural land uses within this overlay area shall be permitted to continue as they occur at the time the Recommended General Plan is adopted.
- B. Upon annexation of any lands subject to Williamson Act contracts into the City limits, the City shall coordinate with property owners, the County of Riverside, and appropriate state agencies to assure the complete transfer of Williamson Act contracts to the City.
- C. Where residential development is proposed immediately adjacent to lands used for agricultural purposes, a minimum 100-foot buffer zone shall be provided between the shared property line and new residential structures. The buffer zone shall consist of open space, but may include landscaping treatments, earthen berms or other appropriate design features, as approved by the City.
- D. The City shall cooperate and coordinate with government and other appropriate agencies to assure that environmentally sound agricultural practices, which are in compliance with local, state and federal agricultural codes, are utilized on all agricultural lands within the City boundaries.
- E. All surface or subsurface disturbances, which may aggravate wind erosion in the planning area, shall comply with the City's Dust Control Plan requirements, air quality mitigation measures set forth in this EIR, and other applicable air quality regulations. Such activities may include excavating, grading, leveling, and other related actions.
- F. Should agricultural lands be converted to urban land uses, elements of the past agricultural uses, such as date palm groves or citrus orchards, shall be incorporated into the on-site open space areas, streetscapes and landscape designs to the greatest extent practical.
- G. All agricultural and urban activities shall conform to the noise standards described in Section 9.100.210 of the City Municipal Code and other mitigation measures set forth in Section III-J (Noise) of this EIR.

Mitigation Monitoring/Reporting Program

- A. All development proposals shall be reviewed by the Community Development Department to assess the potential for land use incompatibilities between agricultural and urban land uses, and to assure that appropriate mitigation measures are identified and implemented.

Responsible Parties: Community Development Department, City Engineer, developers, affected landowners

- B. The City shall maintain and routinely update a land use inventory, which monitors the conversion of lands within the Agricultural Overlay to urban uses. This information shall be used to assess the need for developing additional agricultural and urban interface programs and land use standards.

Responsible Parties: Community Development Department

C. Traffic/Circulation

1. Existing Conditions

The generation of vehicular traffic is directly related to the type, intensity and location of existing and planned land uses. While land use decisions within the La Quinta General Plan planning area have a direct impact, so too does the background traffic generated by land uses in surrounding communities. The adequacy of the transportation network is, therefore affected by decisions somewhat under the control of the City, but also decisions made by other jurisdictions which can affect the La Quinta transportation network. The following discussion is largely based upon the traffic and circulation analysis prepared for the General Plan Update by RKJK & Associates, Inc.⁷ This report is included in its entirety in Appendix F of this document.

Regional Roadways

Over the past few decades, the Coachella Valley has grown into a largely continuous and linear suburban region which is connected by state and interstate highways, and a network of arterial roadways. The earliest development in the City of La Quinta occurred within the La Quinta Cove and was connected to other Coachella Valley settlements by the historic Bradshaw Trail. By the City's incorporation in the early 1980s, however, development began to move northward toward Highway 111, and to the east and southeast along the edge of the Santa Rosa Mountains.

Today, Interstate-10, State Highway 111 and State Highway 86 comprise the backbone circulation system of the planning area. Interstate-10 serves as the major inter-community connector in the Coachella Valley, while also connecting the region with Los Angeles to the west and Arizona to the east. In the La Quinta vicinity, Interstate-10 consists of an eight-lane divided freeway accessed from diamond-shaped interchanges spaced a minimum of one mile apart. Direct access between the City and Interstate-10 is currently provided by the Washington Street and Jefferson Street interchanges.

⁷ "City of La Quinta General Plan Update Traffic Study (Revised), La Quinta, California," prepared by RKJK & Associates, Inc., September 28, 2000.

State Highway 111 has become an important intra-regional corridor serving the Coachella Valley cities. In the La Quinta vicinity, it generally runs along the toe of the Santa Rosa Mountains and, in most locations, has been constructed to its ultimate six-lane divided design standard. Highway 111 provides primary access to a wide range of commercial and resort developments, and routinely accommodates a high volume of pass-through trips originating outside the City limits.

Traffic in the planning area is also accommodated by an extensive arterial roadway network, which generally follows section and mid-section lines and provides north-south and east-west conveyance throughout the planning area. Major north-south connectors include Washington Street, Jefferson Street and Madison Street. Primary east-west connectivity is provided by Fred Waring Drive, Avenue 42, Country Club Drive and Airport Boulevard. The beginnings and evolution of the City have improved the accessibility of the Cove area to the regional roadway network.

Current Traffic Conditions

A wide range of traffic data were collected to document and evaluate existing traffic conditions, and to assess future transportation impacts within the General Plan planning area. In addition to the technical analyses and studies conducted by RKJK & Associates, Inc. (see Appendix F), traffic counts collected by the City, CalTrans and the Coachella Valley Association of Governments (CVAG) were used to quantify and characterize existing traffic volumes and conditions within the planning area. These various counts are from the period of 1990 through 1999 and include counts of mid-block roadway segments and intersection turning movements.

Levels-of-Service

Roadway capacity is defined as the number of vehicles that pass a section of roadway or a particular intersection in a given period of time under prevailing conditions. Roadway capacity is determined by a number of factors, including roadway surface conditions, lane widths, alignment, grade and intersection design. For example, raised medians typically reduce the number of traffic conflict points, thereby enhancing flow and increasing roadway capacity. Restricted access also increases capacity by minimizing traffic interruptions associated with vehicles entering or existing the roadway.

The ability of a roadway to accommodate different traffic demands is known as its Level-of-Service (LOS). The Level-of-Service is a qualitative measure used to describe the efficiency of traffic flow, and compares existing traffic volumes with available roadway capacity. LOS values range from "A" through "F." LOS A represents the best, free-flow conditions, and LOS F indicates the worst conditions or system failure. Mid-block Levels-of-Service are represented as volume-to-capacity ratios, or traffic volume divided by roadway capacity. Smaller ratios close to 0.00 indicate better efficiency, and therefore better Levels-of-Service. As the ratio approaches 1.00 or maximum capacity, the roadway approaches LOS F, which is characterized by extreme traffic congestion.

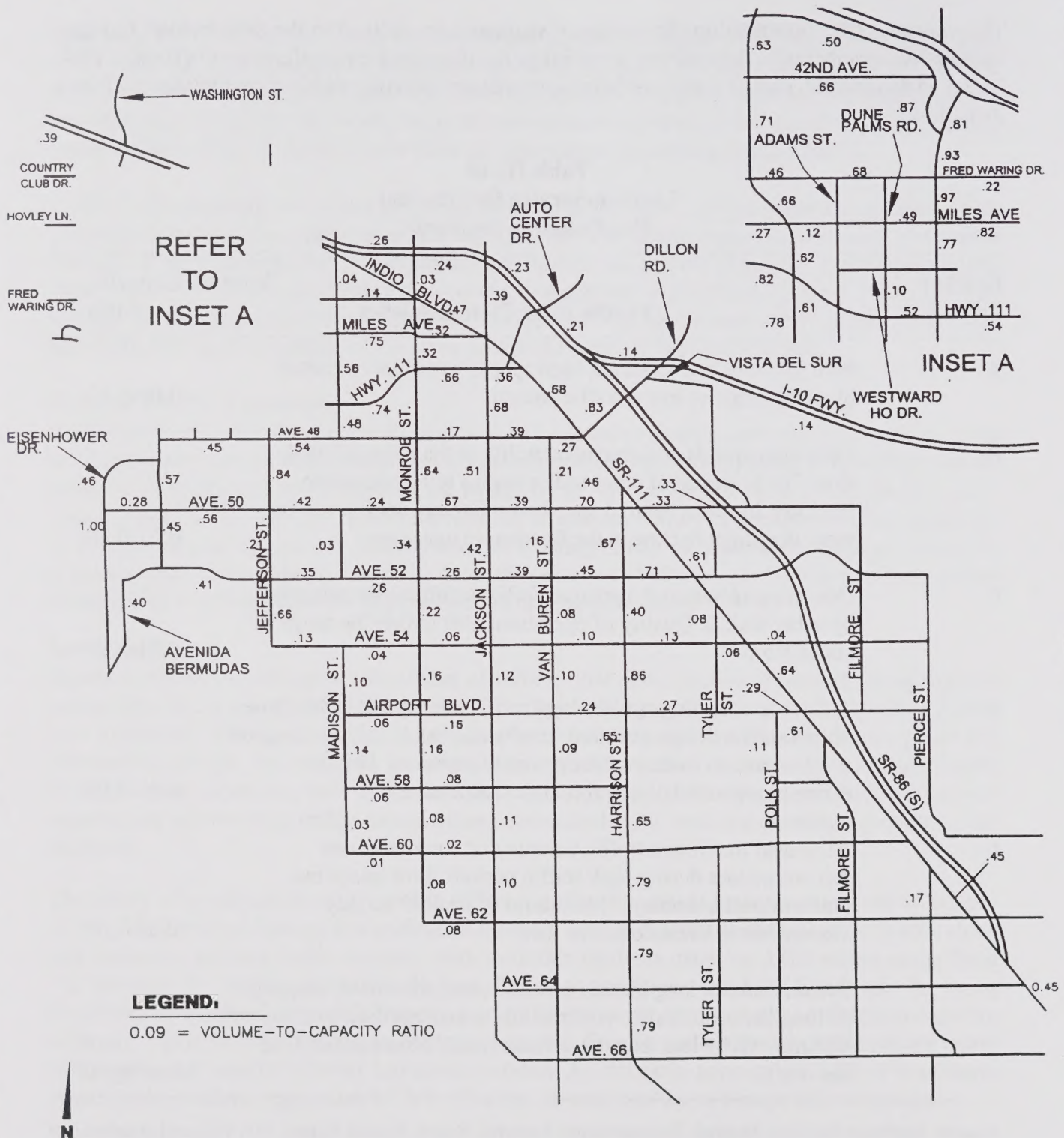
LOS C has long been considered the desirable and optimal level of traffic volume on any given roadway. However, it represents a standard that is progressively more difficult and costly to achieve in urban areas. For peak operating periods, LOS D and/or a maximum volume to capacity ratio of 0.90 is now considered to be the generally acceptable level-of-service.

The various LOS classifications for roadway segments are defined in the table below. Existing volume-to-capacity ratios for roadway segments in the planning area are illustrated in Exhibit III-4. Based on this exhibit, planning area roadway segments are operating within capacity ($v/c < 1.0$) on a daily basis.

**Table III-10
Level-of-Service Descriptions
For Roadway Segments**

Level of Service	Traffic Flow Characteristics	Volume/Capacity Ratio
A	Free flowing, low volumes, high speed; speed not restricted by other vehicles in the traffic stream.	0.00-0.60
B	Operating speeds and maneuverability in the range of stable flow, but presence of other traffic begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.	0.61-0.70
C	Operating speeds and maneuverability significantly controlled by other traffic. Quality of operations still within the range of stable flow.	0.71-0.80
D	Tolerable operating speeds, high traffic density but stable flows; often used as design standard in urban areas. At this level, speed and freedom to maneuver are severely restricted. Drivers experience general discomfort and inconvenience.	0.81-0.90
E	At or near maximum traffic volume that a roadway can Accommodate during peak traffic periods. Low speed but uniform traffic density. "Maximum Capacity." Highly susceptible to breakdowns in flow.	0.91-1.00
F	System failure; long queues of traffic; unstable flows; stoppages of long duration; traffic volumes and speed can drop to zero; traffic volume will be less than the volume which occurs at Level-of-Service E.	Not Meaningful

Source: Highway Capacity Manual, Transportation Research Board, Special Report 209, National Academy of Science, Washington, D.C., 1997.



TERRA NOVA®
Planning & Research, Inc.

**City of La Quinta
General Plan
Year 2000 Daily Volume-to-Capacity Ratios
in the Planning Area**



Exhibit

III-4

Intersection Analysis

Intersections represent the most constrained portions of the roadway network. For intersections, the LOS is defined quantitatively as the number of seconds the vehicle is delayed in passing through the intersection. For signalized intersections, average total delay per vehicle is used to determine the LOS. Intersection LOS is defined in the following table.

**Table III-11
 Level-of-Service Descriptions
 For Signalized Intersections**

Level-of-Service	Average Total Delay Per Vehicle (Seconds)
A	0 to 10.00
B	10.01 to 20.00
C	20.01 to 35.00
D	35.01 to 55.00
E	55.01 to 80.00
F	80.01 and up

The following table illustrates existing intersection levels-of-service in the planning area. The data indicate that the intersections modeled are currently operating at acceptable levels-of-service (LOS D or better).

Table III-12
Existing Intersection Levels-of-Service (Year 2000)

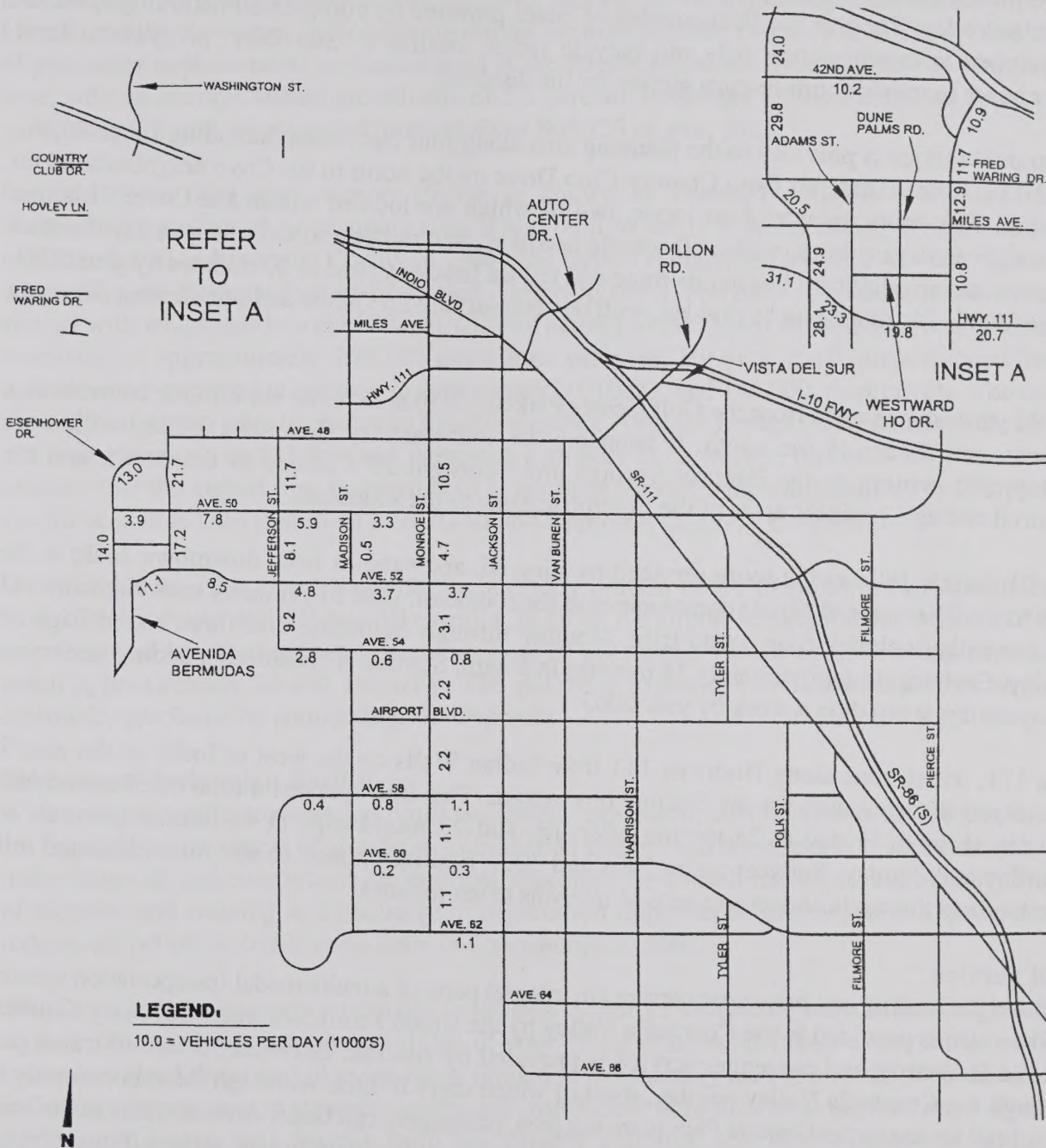
Intersection	Delay(secs)		LOS	
	am	pm	am	pm
Jefferson St. (N/S) at:				
SR-111 (E/W)	22.8	27.7	C	C
Ave. 50 (E/W)	11.5	12.7	B	B
Ave. 52 (E/W)	11.4	10.4	B	B
Ave. 54 (E/W)	9.6	8.8	A	A
Country Club Dr. (E/W)	12.0	15.0	C	C
Fred Waring Dr. (E/W)	14.5	14.6	B	B
Miles Ave. (E/W)	14.7	15.4	C	C
Madison St. (N/S) at:				
Ave. 50 (E/W)	9.2	9.8	A	A
Ave. 52 (E/W)	9.9	10.0	A	A
Monroe St. (N/S) at:				
Ave. 52 (E/W)	9.3	9.1	A	A
Ave. 54 (E/W)	10.4	10.3	B	B
Eisenhower Dr. (N/S) at:				
Ave. 50 (E/W)	26.6	28.1	C	C
Washington St. (N/S) at:				
Calle Tampico (E/W)	24.2	27.1	C	C
Ave. 50 (E/W)	34.0	37.3	C	D
Ave. 52 (E/W)	33.0	36.0	C	D

Source: Table 2-2, "City of La Quinta General Plan Update Traffic Study (Revised), La Quinta, California," RKJK & Associates, Inc., September 28, 2000.

Average Daily Traffic Volumes

The total number of vehicles that pass a defined roadway segment in both directions within a 24-hour period is known as the Average Daily Traffic (ADT) volume. ADT provides a useful benchmark number for determining various roadway configurations and design aspects. The peak hour ADT value, which represents the highest volume of traffic to pass over a roadway segment during a one-hour period, is also a useful means of determining roadway capacity and intersection levels-of-service.

A variety of traffic data were collected to evaluate existing traffic volumes in the planning area, including peak hour counts in 1999 and 2000. Data sources include the City of La Quinta, County of Riverside, Coachella Valley Association of Governments, CalTrans and a variety of project-specific traffic studies conducted in the planning area and vicinity. Existing average daily traffic volumes in the planning area are illustrated in Exhibit III-5.



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Planning & Research, Inc.

**City of La Quinta
General Plan
Year 2000**

Average Daily Traffic (ADT) Volumes



Exhibit

III-5

Public Transportation

The Sunline Transit Agency provides public transit service within the planning area and the Coachella Valley. The Sunline fleet consists of buses powered by compressed natural gas, which are equipped with wheelchair lifts and bicycle racks. Sunline's "Sun Dial" program utilizes smaller buses to provide curb-to-curb service for the disabled.

Mass transit service is provided to the planning area along four bus routes, including Lines 70, 86, 91 and 111. Line 70 extends from Country Club Drive on the north to the Cove neighborhood on the south. This route includes four loops, two of which are located within the Cove. This line operates seven days a week, with a 60-minute headway, and thirteen round trips per day. Sunline expects to add an additional bus to this route and reduce headway time to 30 minutes by year 2003. By year 2007, this route may be divided, with one bus serving La Quinta and one serving Bermuda Dunes.

Line 86 generally extends from the Golf Center Parkway/I-10 area in the north to the communities of Oasis and Mecca in the south. It connects the southeasterly Coachella Valley with such employment centers as the Fantasy Springs and Spotlight 29 Casinos in the north, and the industrial and agri-business areas of the Enterprise Zone to the southeast.

Line 91 closely follows the route serviced by Line 86, and extends from downtown Indio in the north to the Thermal and Mecca communities in the southeast. Line 91 primarily uses Highway 111 and currently includes four round-trips Monday through Saturday, and three round-trips on Sunday. Each trip is approximately 74 minutes in length. Sunline is considering adding one round trip operating seven days a week by year 2003.

Line 111, which runs along Highway 111 from Indian Wells on the west to Indio on the east, is considered the trunk line for the Sunline bus system. This line operates a total of 37 round trips Monday through Friday at 25-minute intervals, and 23 round trips at 44-minute intervals on Saturday and Sunday. Between years 2001 and 2007, Sunline expects to add four additional full-time buses to this route and reduce service intervals to ten minutes.

Rail Service

Rail freight hauling and passenger service are integral parts of a multi-modal transportation system. Rail service is provided to the Coachella Valley by the Union Pacific Railroad (formerly Southern Pacific Railroad), and passenger service is provided by Amtrak. Between 30 and 40 trains pass through the Coachella Valley per day, most of which carry freight. Although there is currently no direct rail access to the General Plan planning area, passengers can board Amtrak trains at the Indio platform, and rail sidings in Indio and Coachella currently facilitate freight service. Future freight service may become available within the planning area, east of Thermal.

Aircraft Traffic

The Palm Springs International Airport serves as the primary air transportation link for the Coachella Valley and the City of La Quinta. The airport is classified as a long-haul commercial service airport and is capable of supporting non-stop commercial service to destinations over 1,500 miles away. The airport is also classified as a small hub air passenger airport, with major

destinations to San Francisco, Chicago, Seattle and New York. Commercial traffic at Palm Springs International is clearly seasonal, with the peak service period extending from January through March, and the slowest period occurring during summer months. From 1972 to 1994, the number of passenger enplanements accommodated at the airport increased from 143,809 to 486,644 per year, with an average annual growth rate of 5.5 percent. Passenger enplanements are expected to continue to rise and are estimated to reach about 809,256 by year 2015.⁸

Desert Resorts Regional Airport (formerly known as Thermal Airport) is located in the southeasterly portion of the planning area. It was built by the U.S. Army during World War II and was transferred to Riverside County in 1948. The airport is classified by the FAA as a "Transport Airport" in the National Plan of Integrated Airport Systems, and most operations involve smaller aircraft with wingspans less than 79 feet. Current activity at the Desert Resorts Regional Airport are estimated at approximately 108,100 operations per year. By year 2010, airport capacity and operations are expected to increase to approximately 210,000 and 140,000, respectively. The current airport master plan calls for facilities to accommodate Airplane Design Groups (ADG) IV aircraft with wingspans up to 171 feet and Approach Category D. However, forecasts of future activity indicate that the airport may be capable of supporting aircraft with wingspans up to 262 feet and should be planned at a minimum to ADG III and Approach Category C standards.^{9 10}

Bermuda Dunes Airport is located in the northerly portion of the planning area, adjacent to the Union Pacific Railroad/Interstate-10 corridor. In 1995, the airport accommodated a total of 25,332 operations, of which about 6.6% were business jet operations. Future operations are expected to reach approximately 26,852 annually. The potential expansion of facilities at this airport is essentially precluded by surrounding development.

Bicycle and Pedestrian Facilities

With growing traffic volumes and limits to capacity expansion, alternative modes of transportation are important components of an effective circulation system, and the physical facilities necessary to make them safe and comfortable are essential, especially for a resort residential community. The use of bicycles and walking as a means of transportation improves health, provides enjoyment, and reduces air pollution, traffic congestion and transportation costs.

The City currently has only a partially developed system of sidewalks, bicycle lanes or multi-use trails within roadway designs and rights-of-way. In some locations, their construction has been inconsistent and disjointed. Bicycle use is limited in the planning area as a result of several factors, including extreme heat in summer months and insufficient right-of-way along roadways. However, the planning area will benefit from the careful planning and development of alternative transportation corridors that provide pedestrians and bicyclers with good connections between major commercial and residential areas, employment centers, schools, parks and other recreational

⁸ "Palm Springs Regional Airport Master Plan, Part 150 Noise Compatibility Study Update". Prepared by Coffman Associates. 1993.

⁹ "Airport Master Plan for Thermal Airport, Riverside County". Prepared by Coffman Associates, Inc. October, 1990.

¹⁰ "Thermal Airport Environmental Impact report/Environmental Assessment" Prepared for the Riverside County Economic Development Agency. Prepared by Coffman Associates, Inc. 1990.

sites. The development of pedestrian walkways, signals, crosswalks, lighting, benches and other amenities encourages walking as an alternative mode of transportation. Traffic calming techniques and reduced vehicle speeds can also be employed to make commercial districts and other areas more pedestrian and bicycle friendly.

All-Weather Access

The planning area includes numerous channels and drainage facilities which could affect roadway access in the Cove neighborhood and north of Highway 111. Several bridge crossings are located throughout the City, including those at the following locations: 1) Washington Street at the Coachella Valley (Whitewater River) Stormwater Channel; 2) Washington Street at the La Quinta Evacuation Channel; 3) Eisenhower Drive at the La Quinta Evacuation Channel; 4) Jefferson Street at the La Quinta Evacuation Channel and the Coachella Valley Irrigation Canal; 5) Avenue 50 at the Coachella Valley Irrigation Canal; and 6) Avenue 52 at the Coachella Valley Irrigation Canal.¹¹

However, there are a few locations which may still require the construction of all-weather crossings to assure accessibility during major flooding. Currently, Jefferson Street, Adams Street and Dune Palms Road lack all-weather crossings over the Coachella Valley (Whitewater River) Stormwater Channel. Avenue 50 east of Washington Street also lacks an all-weather crossing over the La Quinta Evacuation Channel. The City Engineering Department is currently evaluating the feasibility of constructing a new bridge at Jefferson Avenue and the Coachella Valley Stormwater Channel.¹² The bridge at Washington Street and the La Quinta Evacuation Channel was recently (2000) widened, and plans are being developed to widen the bridge on Eisenhower Drive at the Evacuation Channel.

2. Project Impacts

La Quinta General Plan Transportation Model

The La Quinta Transportation Model (LQTM) was developed by RKJK & Associates, Inc. to evaluate and refine local growth policies pertaining to circulation and transportation in the General Plan planning area. The model is based upon the Coachella Valley Area Transportation Study 2020 Model (CVATS), which was developed by the Southern California Association of Governments, in conjunction with the Coachella Valley Association of Governments (CVAG) and the Riverside County Transportation Commission. The CVATS model is a large area network model used for regional transportation planning and is currently used by most of the agencies in the Coachella Valley to develop their long-range transportation plans.

Using procedures similar to those used in the CVATS model, but on a more refined and focused level, the General Plan modeling process consisted of defining 146 Traffic Analysis Zones (TAZs) and the roadway network. Each TAZ represents an area in which traffic is generated. The number of trip “productions” and “attractions” assigned to a TAZ are dependent upon the land uses that occur within that TAZ. The TAZ system was specifically tailored to the City of La Quinta in order to provide the most accurate data possible.

¹¹ Steve Spear, Engineer, City of La Quinta, July 16, 1999.

¹² Ibid.

Proposed land use information and socio-economic and highway network assumptions were utilized to project future traffic demands upon buildout of the planning area. Based on proposed land uses within each TAZ, traffic volumes were generated and distributed along the circulation system. The TAZ system produced a forecast of traffic volumes in the planning area, and approximated how actual traffic is expected to enter and utilize the roadway network.

Trip Generation

The total number of vehicle trips produced in or attracted to a geographic area is directly related to the land use and demographic variables found in each TAZ. Therefore, trip generation expected at buildout of the planning area is based on the land uses assigned by the Recommended Alternative Land Use Plan. The LQTM model estimates the number of peak season vehicle trips that will be produced on an average weekday for each analysis zone. The model also gives special consideration to seasonal peak trips to address the increased travel demand (vehicle trips) that occurs when visitors and seasonal residents utilize the City roadway network.

Based on the land use pattern established by the Recommended Alternative, buildout of the planning area is expected to generate approximately 1,200,150 daily trip-ends.¹³ Daily traffic volume projections expected upon buildout of the Recommended Alternative are illustrated in Exhibit III-6.

Levels-of-Service on Roadway Segments

Volume/capacity ratios for each modeled roadway segment in the planning area are illustrated in Exhibit III-7. For the purposes of the La Quinta General Plan Update, a volume/capacity ratio of 0.90 and below is considered within an acceptable level of service. A V/C ratio between 0.91 and 0.99 is considered "near capacity," and a V/C ratio of 1.0 or greater is considered "over capacity."

The data provided in Exhibit III-7 indicate that most of the roadway segments will continue to operate at acceptable Levels-of-Service (LOS D or better and/or maximum V/S ratio of 0.90) at buildout of the proposed General Plan. However, 15 segments, including the following, have been identified as exceeding typical ADT capacities under the Recommended Alternative (i.e. V/C ratios of 1.0 or greater).

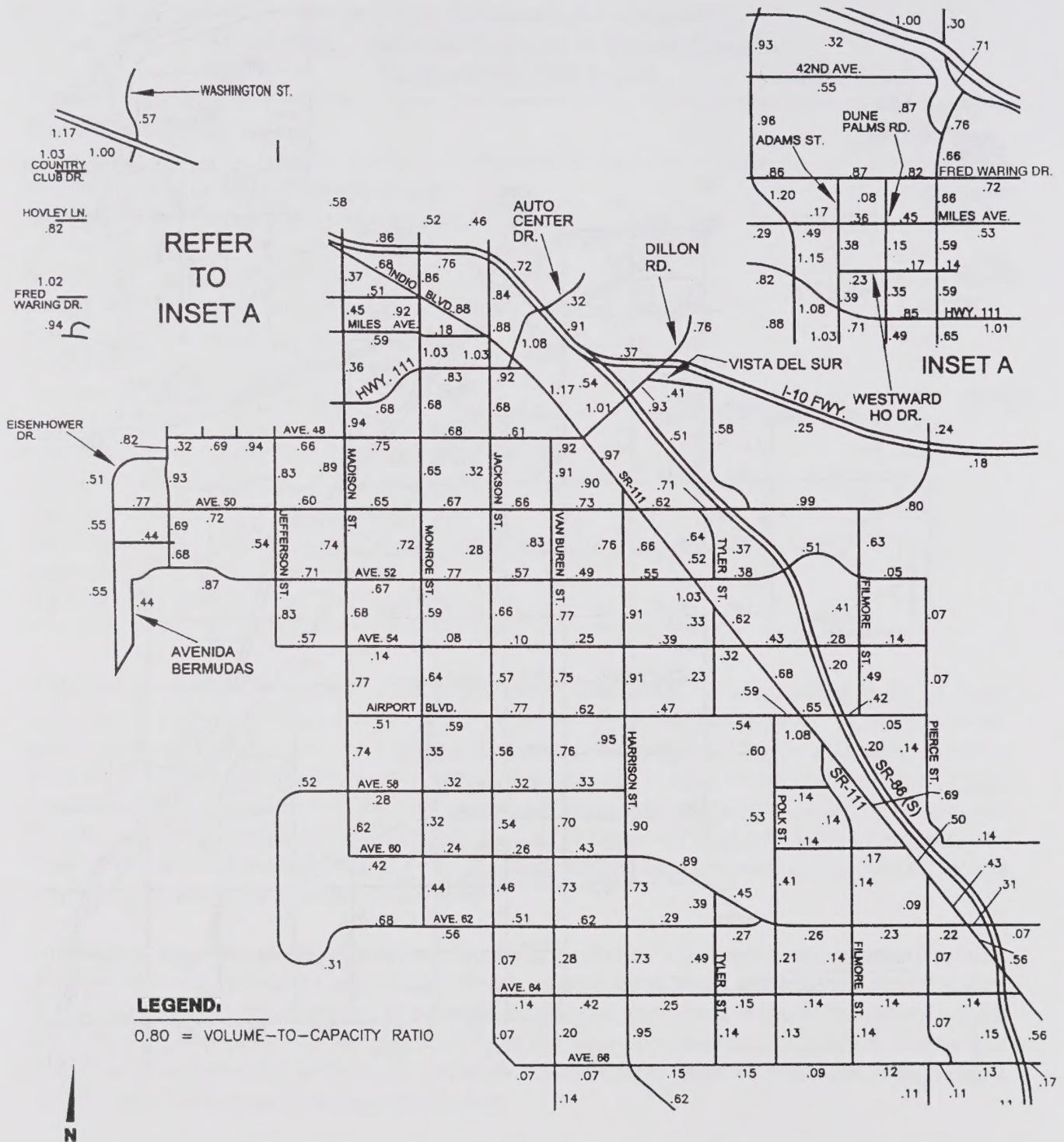
¹³ "City of La Quinta General Plan Update Traffic Study (Revised), La Quinta, California," RKJK & Associates, Inc., September 28, 2000.

Table III-13
General Plan Recommended Alternative
Roadway Segments Projected to Exceed Capacity
Buildout/Post 2020 Period

Roadway Segment	V/C Ratio
Washington St.: Avenue 44 to Miles Ave.	1.20
Washington St.: Miles Ave. to Highway 111	1.15
Adams St.: Highway 111 to Avenue 48	1.03
Monroe St.: Miles Ave. to Highway 111	1.03
Jackson St.: Indio Ave. to Highway 111	1.03
Auto Center Dr.: Interstate-10 to Indio Ave.	1.08
Dillon Rd.: Highway 86(S) to Highway 111	1.01
Avenue 50: Highway 86(S) to Vista Del Sur	1.05
Country Club Dr.: Oasis Club Dr. to Washington St.	1.03
Fred Waring Dr.: Oasis Club Dr. to Washington St.	1.02
Highway 111: Washington St. to Adams St.	1.08
Highway 111: Jefferson St. to Madison St.	1.01
Highway 86/111: Auto Center Dr. to Dillon Rd.	1.17
Highway 111: Avenue 52 to Tyler St.	1.03
Highway 111: Airport Blvd. To Filmore St.	1.08

It should be noted with regard to the above table that traffic volumes along eight of these intersections are projected to exceed capacity by 3% or less of roadway capacity. In addition to the above cited roadway segments, two segments of the US Interstate-10 corridor, extending from the Cook Street to the Jefferson Street interchanges, are projected to be at or to exceed capacity. Other potentially significantly impacted roadway segments will be only indirectly impacted by the General Plan project. These include Jackson Street in the City of Indio, and Highway 86/111 between Auto Center Drive and Dillon Road. Most of the identified impacts are associated with projected growth in background traffic through the 2020 period.

Although a roadway segment may be expected to exceed allowable capacity, intersection improvements may allow the segment to operate at acceptable levels. The LQTM model makes certain assumptions about access to network roadways, and actual impacts to capacity from adjoining development may be lessened by thoughtful site planning, restricted access and conditions of approval. Possible mitigation measures and design parameters that can help preserve capacity and reduce impacts are discussed below.



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**City of La Quinta
General Plan
Post 2020 Volume to Capacity Ratios**



Exhibit

III-7

Intersection Analysis

As part of the General Plan analysis, anticipated turning movements at twenty major intersections have been evaluated to establish anticipated levels-of-service for each intersection in the AM and PM peak hours. As described previously, for signalized intersections, average total delay per vehicle is used to determine the level-of-service. Table III-14, below, indicates that all intersections are expected to operate at an acceptable level-of-service "D" or better at project buildout. This analysis assumes optimized signal timing and provides adequate time for pedestrian crossings.

Table III-14
Anticipated Levels-of-Service for Major Intersections
at General Plan Buildout/Post 2020 Peak Hour

Intersection	Ave. Delay (secs)		LOS	
	am	pm	am	pm
Washington St. (N/S) at:				
Country Club Dr. (E/W)	48.7	49.4	D	D
Hovley Ln. (E/W)	34.9	51.2	C	D
Fred Waring Dr. (E/W)	49.5	46.8	D	D
Miles Ave. (E/W)	45.2	50.7	D	D
SR-111 (E/W)	41.3	48.6	D	D
Eisenhower Dr. (E/W)	49.6	51.0	D	D
Ave. 50 (E/W)	42.4	47.3	D	D
Jefferson St. (N/S) at:				
Country Club Dr. (E/W)	50.5	45.7	D	D
Ave. 44 (E/W)	30.6	49.5	C	D
Miles Ave. (E/W)	27.2	43.7	C	D
SR-111 (E/W)	28.3	36.2	C	D
Ave. 48 (E/W)	46.7	44.1	D	D
Ave. 50 (E/W)	30.5	42.7	C	D
Ave. 52 (E/W)	R	R	--	--
Madison St. (N/S) at:				
Ave. 50 (E/W)	40.1	49.8	D	D
Ave. 52 (E/W)	38.5	45.2	D	D
Jackson St. (N/S) at:				
Airport Blvd. (E/W)	46.6	50.9	D	D
Harrison St. (N/S) at:				
Airport Blvd. (E/W)	39.8	38.6	D	D
SR-111 (N/S) at:				
Airport Blvd. (E/W)	45.9	49.0	D	D
Ave. 62 (E/W)	50.3	46.4	D	D

R = roundabout intersection.

Source: Table 4-2, "City of La Quinta General Plan Update Traffic Study (Revised)," RKJK & Associates, Inc., Sept. 28, 2000.

Golf Cart Route System¹⁴

As part of the evaluation and planning of the City circulation system, the General Plan proposes a comprehensive golf cart route system that will encourage and accommodate golf cart usage in key locations of the planning area. Golf cart usage within the City can provide an enjoyable, convenient, safe, economical and non-polluting alternative mode of transportation. As the planning area builds out and its reputation as a resort residential community continues to grow, golf cart usage can be effectively incorporated into the City's circulation system. The proposed pathway system has been designed to connect residential, recreational, commercial and other community activity centers.

A two-phase golf cart route implementation plan has been developed for the General Plan. Phase I represents a 5- to 10-year time frame and is meant to benefit existing development. Phase II provides a longer term and more comprehensive route plan which should be implemented commensurate with planned growth in the southeast portion of the planning area. Both phases have been designed to maximize potential connectivity with golf cart pathways in adjoining cities. Several recharge stations have been proposed along the path system to minimize mechanical failures. Phases I and II of the golf cart plan are illustrated in Exhibits III-8 and III-9.

Golf Cart Safety

The presence of golf carts on on-street pathways and at intersections will bring a new element to the City's transportation network. However, their usage is not expected to result in significant conflicts with motor vehicle traffic. Cart paths shall be carefully designed and engineered so as to assure the safety of all path users. A minimum of 12 feet is recommended for all Class I (off-street) paths and will allow golf carts to share the pathway with bicyclists and pedestrians. A minimum of 8 feet and appropriate striping should be provided for all Class II (on-street) designated routes. Class III routes will not require extensive modifications except for the installation of signage.

The proposed cart pathways have been selected to minimize vehicular conflicts and avoid mid-block crossings at uncontrolled intersections. To facilitate the safe crossing of Highway 111 and the Coachella Valley Stormwater Channel (Whitewater River), the golf cart plan requires modifying the roadway classification of Adams Street, from Miles Avenue to south of the Coachella Valley Stormwater Channel, to a Modified Secondary Arterial. This modification will allow a Class II golf cart path to be constructed along Adams Street. The proposed Modified Secondary cross-section is illustrated in Exhibit III-10.

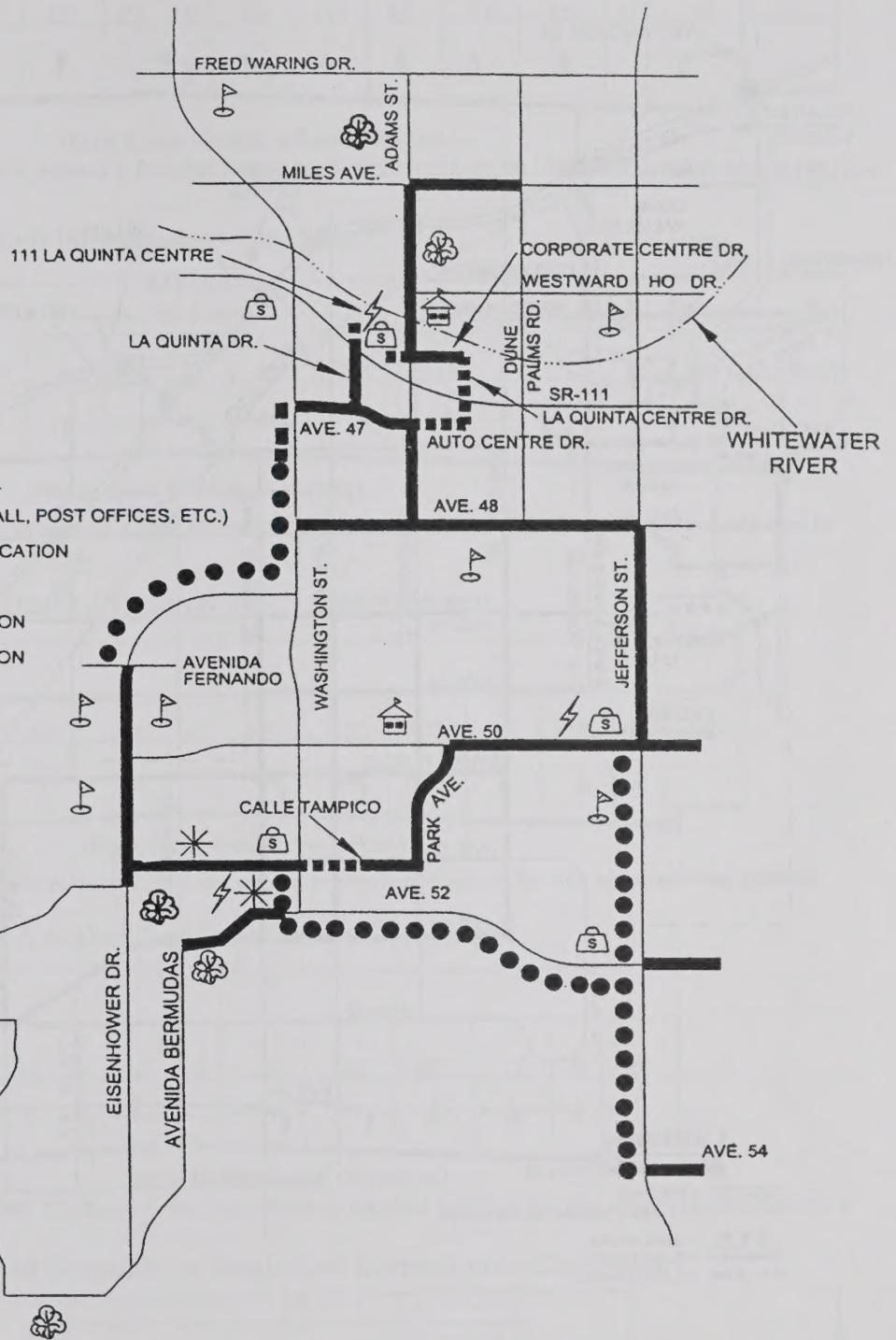
The safety of golf cart operators, pedestrians, bicyclists and motor vehicle operators is of the utmost importance. The golf cart path system is intended for daylight usage only. Although lights will be required on all vehicles, use before sunrise or after sunset will be prohibited. Golf carts which utilize the City's public golf cart routes must comply with specific safety and mechanical requirements set forth in the City's Golf Cart Route Plan, must be certified by the City as "road ready," and must carry an appropriate permit sticker. Golf cart operators must carry a valid California Driver's License and provide proof of insurance. Golf carts must be properly maintained, and must be equipped with seatbelts and child safety equipment.

¹⁴ "Golf Cart Route Evaluation, La Quinta, California," RKJK & Associates, Inc., September 11, 2000.

LEGEND:

-  = CIVIC CENTER (CITY HALL, POST OFFICES, ETC.)
-  = SHOPPING CENTER LOCATION
-  = SCHOOL LOCATION
-  = GOLF COURSE LOCATION
-  = PARKS AND RECREATION
-  = CHARGING LOCATION
-  = CLASS I PATHS
-  = CLASS II PATHS
-  = CLASS III PATHS

AVENIDA MONTEZUMA



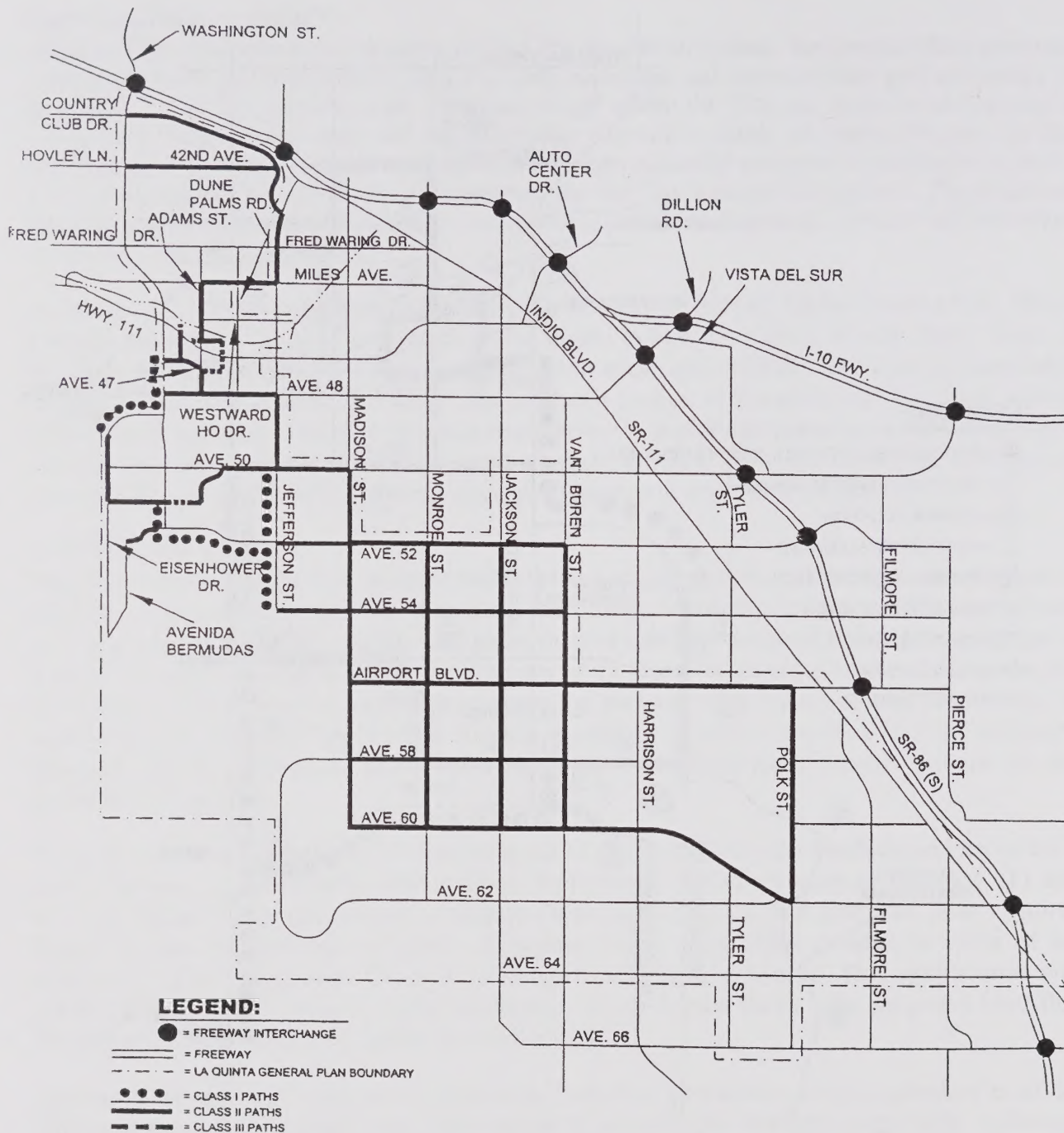
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City of La Quinta
General Plan
Phase I (2005) Golf Cart Routes



Exhibit

III-8



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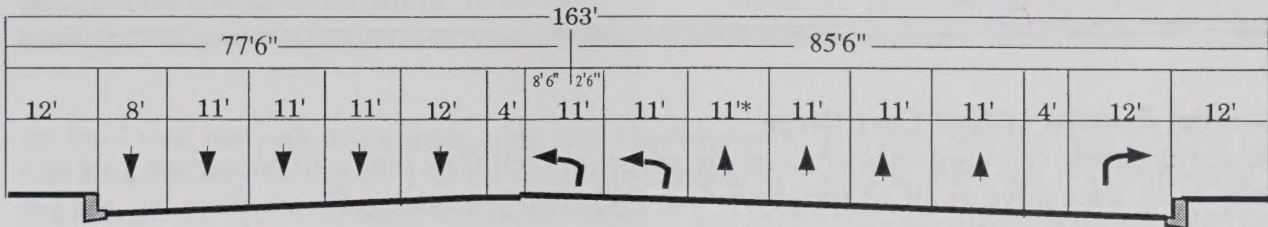
**City of La Quinta
General Plan
Phase II (Buildout) Golf Cart Routes**



Exhibit

III-9

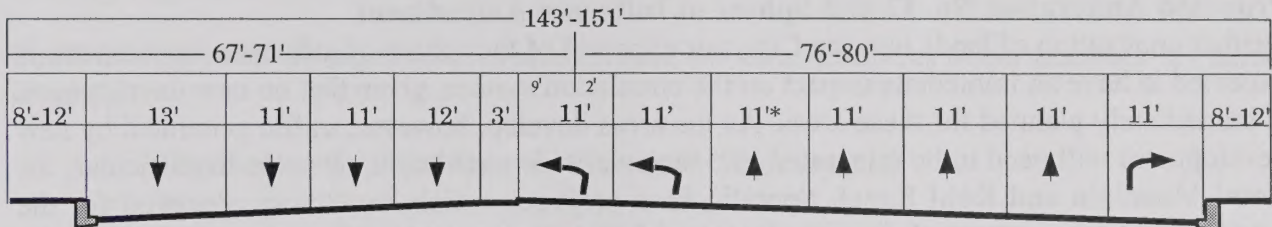
Augmented Major at Dual Left Intersections - State Highway



(Eight Lanes divided, w/breakdown lane)

*Through lane adjacent to turn lane is reduced 1 foot, but returns to standard width on far side of intersection adjacent to median nose.

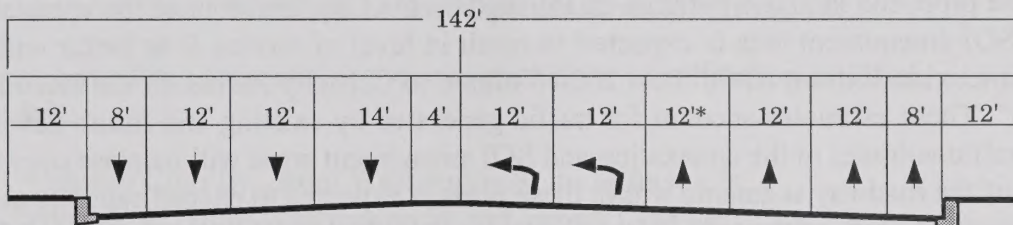
Augmented Major at Dual Left Intersections - City Street



(Eight Lanes divided, no parking)

*Through lane adjacent to turn lane is reduced 1 foot, but returns to standard width on far side of intersection adjacent to median nose.

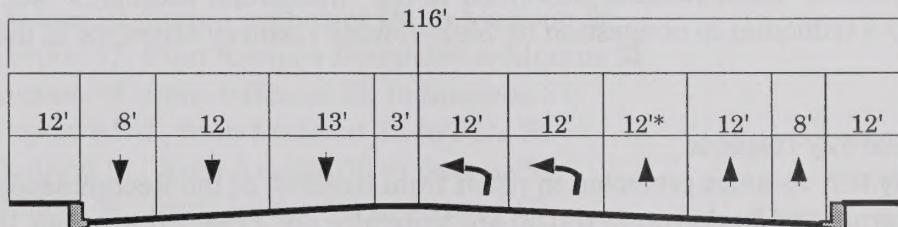
Major Arterial at Dual Left Intersections - State Highway



(Eight Lanes divided, no parking)

*Through lane adjacent to turn lane is reduced 2 foot, but returns to standard width on far side of intersection adjacent to median nose.

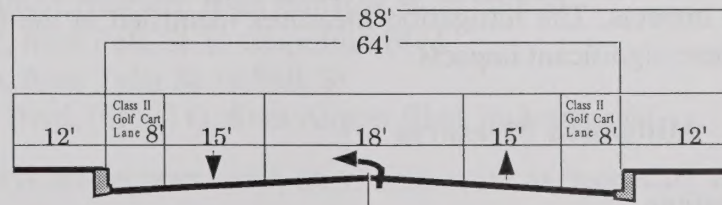
Primary Arterial A at Dual Left Intersections - City Street



(Four Lanes divided, no parking)

*Through lane adjacent to turn lane is reduced 1 foot, but returns to standard width on far side of intersection adjacent to median nose.

Modified Secondary at Single Left Intersections - City Street



(Two Lanes undivided, w/golf cart lane)

Potential Benefits of Golf Cart Usage

The development and implementation of the proposed Golf Cart Plan will encourage golf cart usage as an alternative mode of transportation. Although potential golf cart usage has not yet been quantified, it is expected to contribute, to some extent, to a reduction in the number of motor vehicle trips generated over the life of the General Plan, decreased demand for parking facilities, and an associated reduction in local air pollution.

Proposed Annexation No. 12 and Sphere of Influence Amendment

Neither annexation of lands into the City, nor approval of the sphere of influence amendment, is expected to have an immediate impact on the circulation system, given that no new development is immediately planned for these areas. As the areas develop, however, traffic generated by new development will need to be integrated into the area-wide circulation network. In particular, the Coral Mountain and Kohl Ranch Specific Plan projects, which have been approved for the development of commercial, low, medium and high-density residential, and major community facilities, will contribute to increased traffic volumes within and in the vicinity of the General Plan planning area.

Based on the proposed land use patterns established by the City, buildout of the annexation area and of the SOI amendment area is expected to result in level of service D or better within those areas, as depicted in Exhibit III-7, "Post 2020 Volume to Capacity Ratios for the Recommended Alternative". These estimates account for traffic generated by existing and future development. Although traffic volumes in the annexation and SOI amendment areas will increase over the long-term, none of the roadway segments within these areas is expected to exceed capacity at buildout (post 2020 period). Both of the major intersections analyzed within the annexation and SOI areas are expected to operate at level-of-service "D" during peak hours at project buildout. These include: 1) Jackson Street at Airport Boulevard, and 2) Harrison Street at Airport Boulevard. Assigning the roadway classifications described in the "Mitigation Measures" section, below, will contribute to a reduction in congestion on high-volume roadway segments in the annexation and SOI areas.

Summary of Roadway Impacts

The average daily trip volumes projected to result from buildout of the Recommended Land Use Alternative and projected background traffic are generally not expected to result in significant adverse impacts which cannot be addressed through the assignment of appropriate roadway classifications and planned roadway improvements. However, fifteen roadway segments are likely to operate with volumes that exceed their design capacities at General Plan buildout, and result in significant impacts. The mitigation measures identified in the following section are expected to reduce these significant impacts.

3. Mitigation Measures

Roadway Classifications

The capacities of roadway segments in the General Plan planning area are defined by a number of variables, including the number of travel lanes, the number of access points onto the roadway, and roadway geometry. To adequately serve projected traffic volumes at General Plan buildout,

the local road network will require additional improvements. The upgraded roadway network that will be necessary for the City of La Quinta to adequately circulate local and regional traffic is illustrated in the following exhibits. Exhibit III-11 shows the recommended roadway classifications, and Exhibits III-12 and III-13 illustrate the cross-sections for these classifications. The assignment of these roadway classifications and the preservation of adequate right-of-way, especially at intersections, are expected to contribute to a reduction in congestion on high-volume roadway segments.

The following roadway segments are recommended for classification as Major facilities (six lanes, divided):

- Washington St., from Country Club Dr. to Highway 111
- Washington St., from Avenue 48 to Avenue 52
- Jefferson St., from Country Club Dr. to Avenue 54
- Highway 111, from Washington St. to Jefferson St.
- Madison St., from Avenue 54 to Avenue 58
- Harrison St., from Airport Blvd. To Avenue 64
- Airport Blvd., from Polk St. to Grapefruit Blvd. (Highway 111)

The following roadway segments are recommended for classification as Primary facilities (four lanes, divided):

- Country Club Dr., from Washington St. to Jefferson St.
- Avenue 42, from Washington St. to Country Club Dr.
- Fred Waring Dr., from Washington St. to Jefferson St.
- Miles Ave., from Washington St. to Jefferson St.
- Avenue 48, from Washington St. to Jefferson St.
- Avenue 50, from Eisenhower Dr. to Madison St.
- Avenue 52, from Avenida Bermudas to Monroe St.
- Avenue 54, from Jefferson St. to Madison St.
- Airport Blvd., from Madison St. to Polk St.
- Madison St., from Avenue 50 to Avenue 54
- Monroe St., from Avenue 52 to Avenue 60
- Jackson St., from Airport Blvd. to Avenue 60
- Van Buren St., from Airport Blvd. to Avenue 60
- Avenue 60, from Monroe St. to Harrison St.
- Avenue 60/62 Crossover, from Harrison St. to Polk St.
- Avenue 62, from Polk St. to Grapefruit Blvd.
- Avenue 66, from Tyler St. to Polk St.
- Grapefruit Blvd. (SR-111), from Airport Blvd. to Avenue 64

The following roadways are recommended for classification as Secondary facilities (four lanes, undivided):

- Adams St, from Fred Waring Dr. to Avenue 48
- Dune Palms Rd., from Fred Waring Dr. to Avenue 48

- Avenue 54, from Madison St. to Monroe St.
- Eisenhower Dr., west of Washington St.
- Avenida Bermudas, south of Avenue 52
- Avenue 58, from Madison St. to Harrison St.
- Polk St., from Airport Blvd. to Avenue 66
- Madison St., from Avenue 58 to Avenue 60
- Avenue 60, from Madison St. to Monroe St.
- Monroe St, from Avenue 60 to Avenue 62
- Avenue 58/62 Loop, from Madison St. to Monroe St.
- Avenue 62, from Monroe St. to Avenue 60/62 Crossover
- Jackson St., from Avenue 60 to Avenue 64
- Pierce St., from Grapefruit Blvd. (Highway 111) to Avenue 64

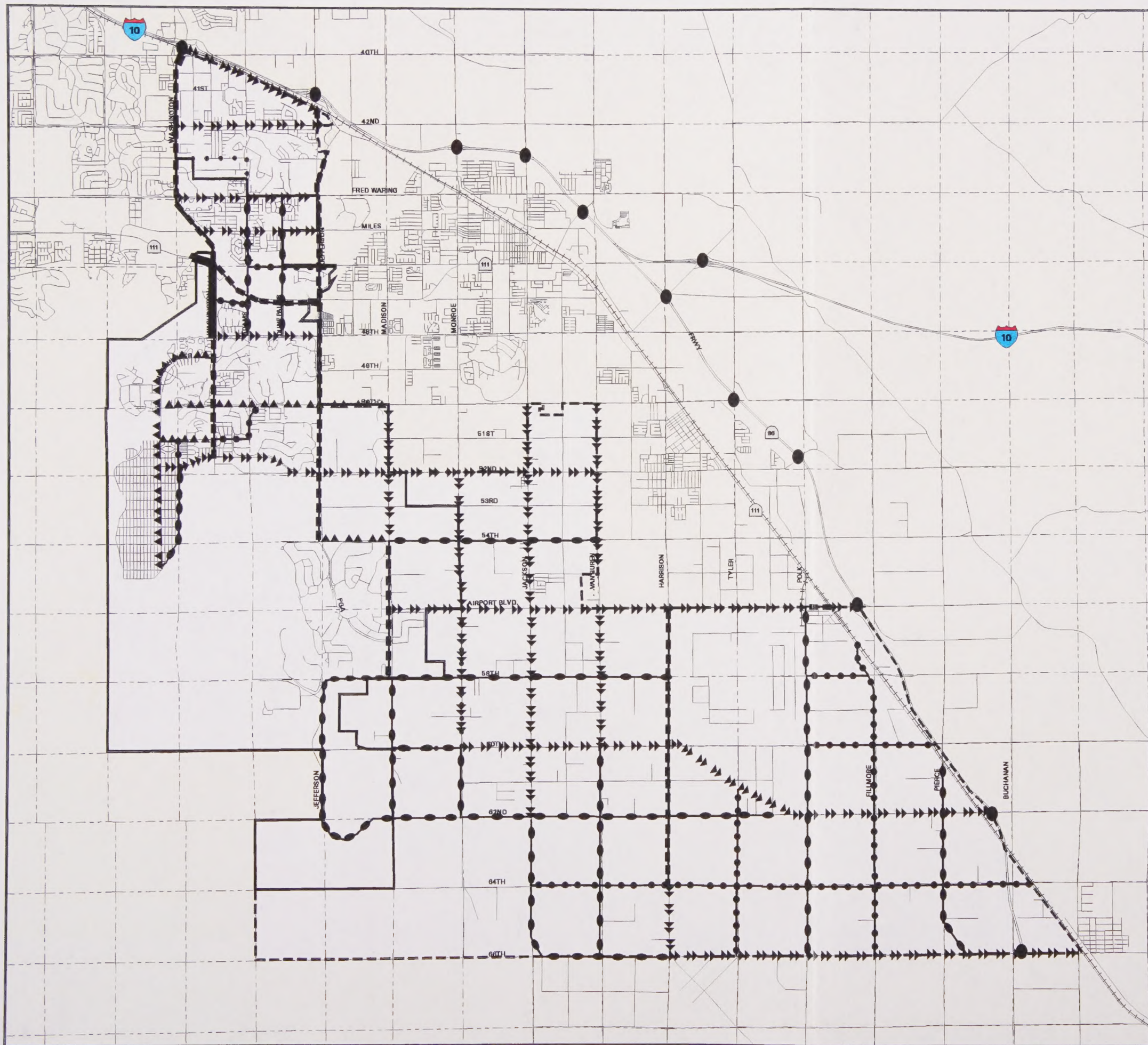
The following roadways are recommended for classification as Collector facilities (two lanes, undivided):

- Westward Ho Dr., from Adams St. to Jefferson St.
- Filmore St., from Grapefruit Blvd. (Highway 111) to Avenue 64
- Avenue 58, from Polk St. to Filmore St.
- Avenue 60, from Polk St. to Grapefruit Blvd. (Highway 111)
- Tyler St., from Avenue 60/62 Crossover to Avenue 66
- Avenue 64, from Jackson St. to Grapefruit Blvd. (Highway 111)

The roadway classification, “Augmented Major,” is recommended for the following locations:

- Washington St., from Country Club Dr. to Interstate-10
- Washington St, from Highway 111 to Avenue 48
- Highway 111, west of Washington St.

In order to accommodate golf carts (see previous Golf Cart Route System discussion), Adams Street is proposed as a modified secondary roadway between Miles Avenue and Corporate Centre Drive, a future roadway north of Highway 111.



City of La Quinta General Plan

LEGEND

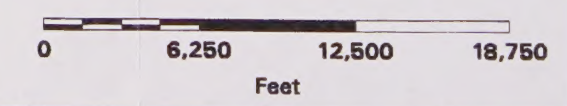
- Roads
- Township/Range Sections
- Railroads
- City Limits
- General Plan Planning Area
- City Sphere of Influence

EXHIBIT III-11 CITY ROADWAY CLASSIFICATIONS

- Freeway Interchanges
- Augmented Major (8D)
- Major Arterial (6D)
- Primary Arterial - A (4D)
- Primary Arterial - B (4D)
- Secondary Arterial (4U)
- Modified Secondary (2D)
- Collector (2U)

Source: City of La Quinta General Plan Update Traffic Study,
RKJK & Associates, Inc. September, 2000

Scale
1:90,000



Riverside County Vicinity Map



Map Prepared on: July 10, 2000
Map Prepared by: Aerial Information Systems
Map Version No.: 5





Augmented Major - City Street

132'

12'	13'	11'	11'	12'	14'	12'	11'	11'	13'	12'

(Eight Lanes divided, no parking)

Major Arterial - City Street

120'

9'	8'	11'	12'	13'	14'	13'	12'	11'	8'	9'

(Six Lanes divided, w/bike lane)

Primary Arterial - A

110'

12'	8'	13'	13'	18'	13'	13'	8'	12'

(Four Lanes divided, w/bike lane)

Primary Arterial - B

100'

12'	7'	12'	13'	12'	13'	12'	7'	12'

(Four Lanes divided, w/bike lane)

Secondary Arterial

88'

12'	14'	12'	12'	12'	14'	12'

(Four Lanes undivided, no parking)

Collector

74'

11'	8'	12'	12'	12'	8'	11'

(Two Lanes undivided, w/bike lane)

Local

60'

12'	18'	18'	12'

(Two Lanes w/parking)

Cul de Sac

50'

7'	18'	18'	7'

(Two Lanes, w/parking)

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Planning & Research, Inc.

**City of La Quinta
General Plan**

Street Cross Sections - City Streets



Exhibit

III-12

Augmented Major - State Highway 136'-144'

8'-12'	8'	11'	11'	11'	12'	14'	12'	11'	11'	11'	8'	8'-12'

(Eight Lanes divided, w/breakdown lane)

Major Arterial - State Highway 140'

12'	8'	12'	12'	14'	24'	14'	12'	12'	8'	12'

(Six Lanes divided, w/ bike lane)

Intersection Improvements

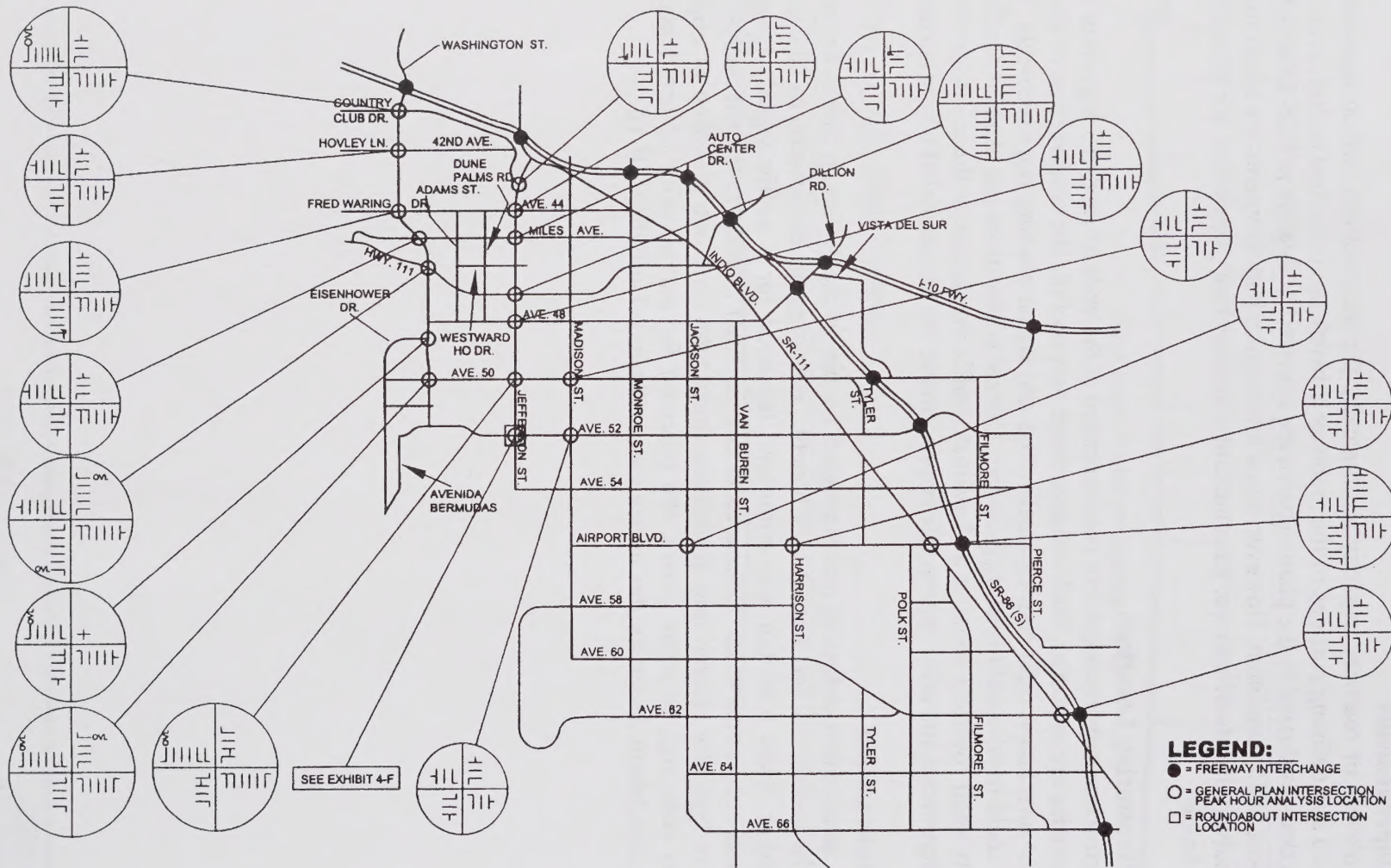
The ultimate arbiters of roadway capacity are typically the intersections, which represent the most constrained and defining portions of the roadway network. As described earlier, each of the twenty intersections evaluated in the planning area are expected to operate at LOS D or better in the buildout (post 2020) condition. However, some intersection improvements are recommended to optimize roadway levels-of-service. Recommended intersection geometries are illustrated in Exhibit III-14, below.

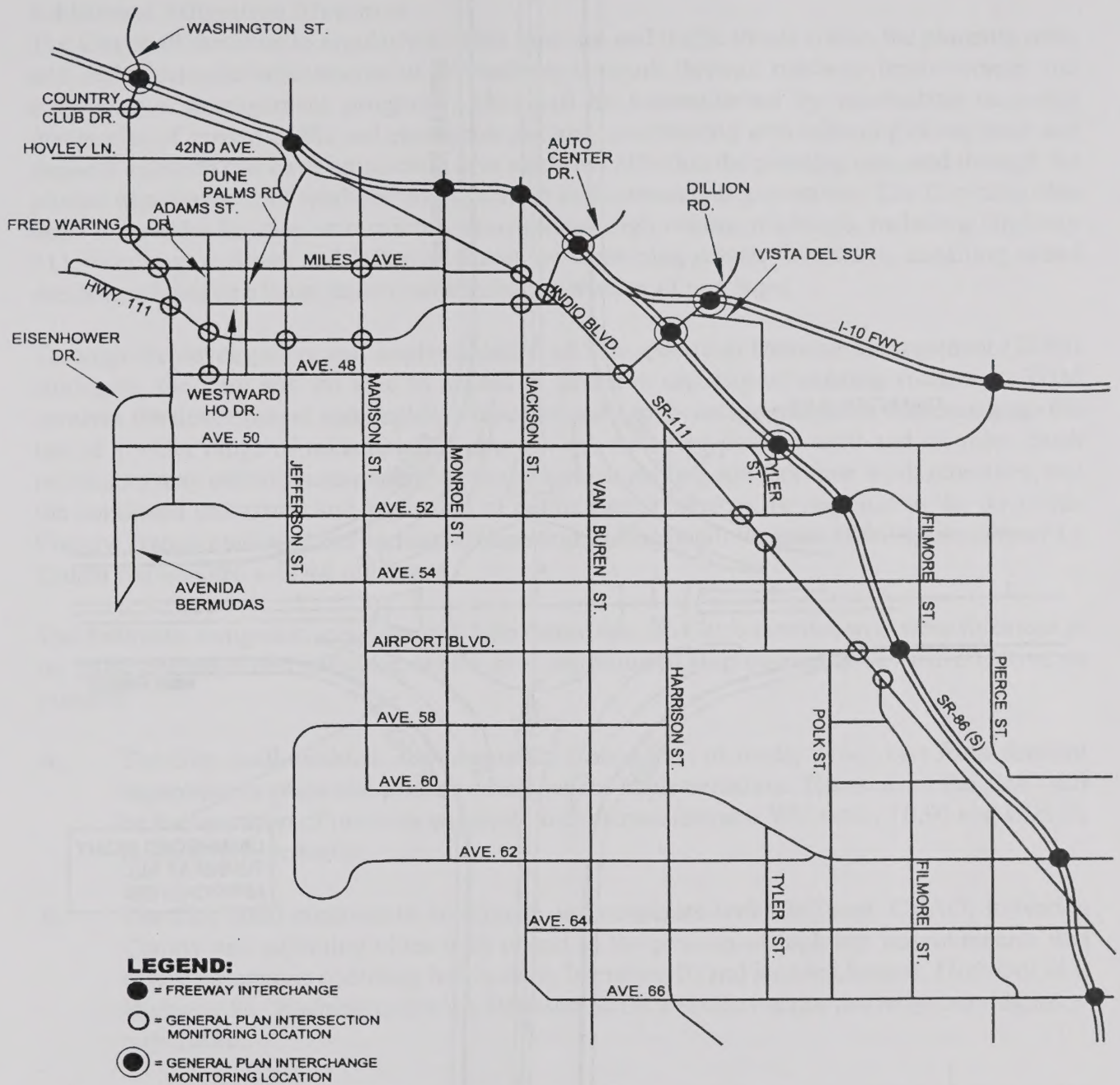
Intersection Monitoring Locations

Additional intersection enhancements are recommended at the ends of roadway segments where capacity deficiencies are expected. Such enhancements may include the construction of dual left turn lanes, right turn lanes, right turn channelization and signal phasing improvements. These improvements could require additional right-of-way. Critical intersections are identified in Exhibit III-15. The City shall routinely monitor and evaluate traffic conditions at these intersections to assure that realignments and other appropriate improvements are implemented where necessary.

Roundabout Intersection

A roundabout intersection design is recommended for use at the Jefferson Street/Avenue 52 intersection. The roundabout has a number of benefits, including the elimination of unnecessary “red light” delays. Such a design also eliminates the need for a traffic signal, associated maintenance and operational costs. Compared to conventional intersections, vehicle speeds at roundabouts are typically slower, and drivers are faced with only one direction of opposing traffic, thereby reducing, to some extent, the potential for and severity of accidents. The recommended roundabout design for this intersection is illustrated in Exhibit III-16.





City of La Quinta
General Plan
Post 2020 Intersection
Monitoring Locations

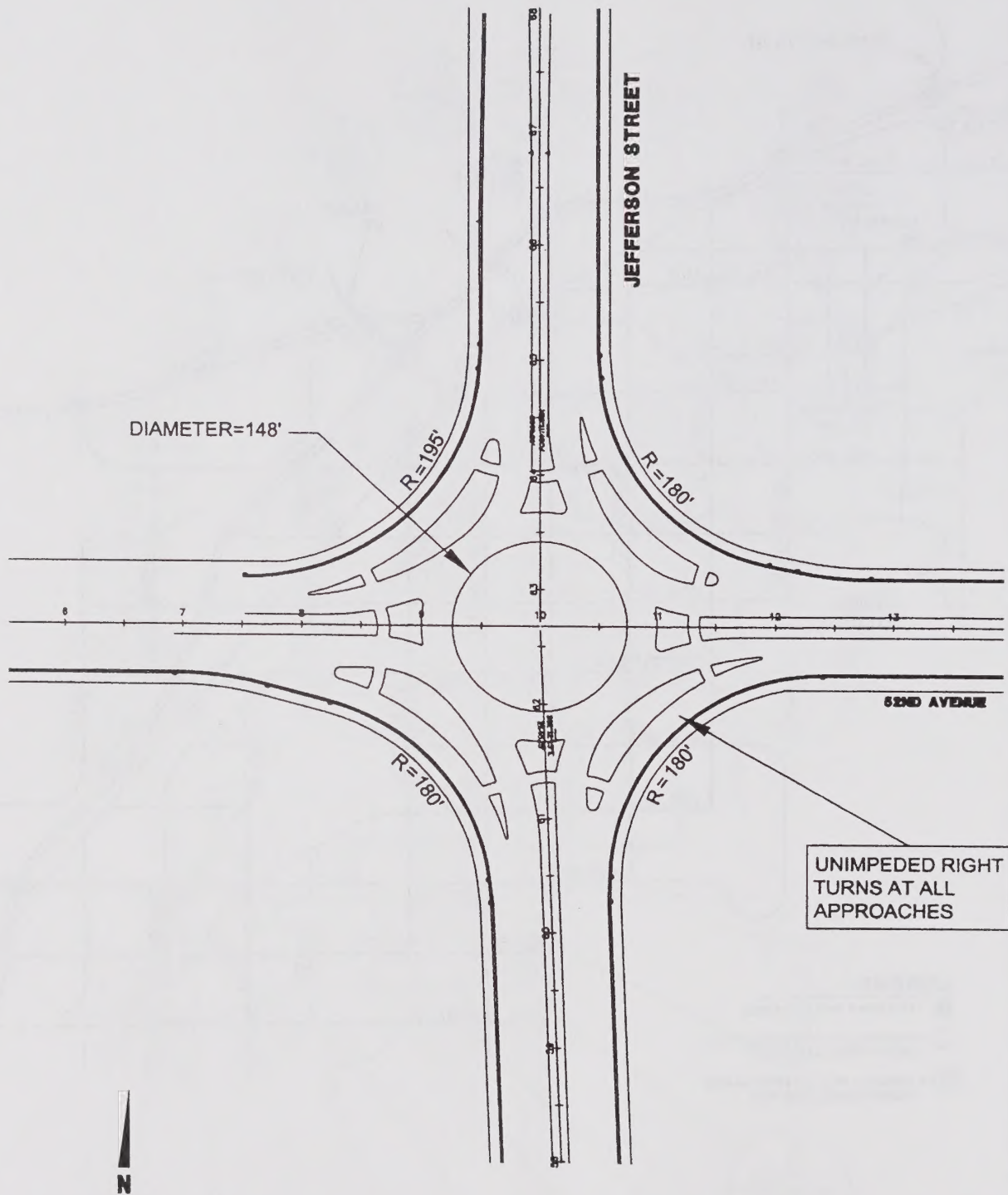


Exhibit

III-15



TERRA NOVA[®]
Planning & Research, Inc.



SOURCE: RBF CONSULTING



TERRA NOVA[®]
Planning & Research, Inc.

City of La Quinta
General Plan
Proposed Roundabout Design
Jefferson Street/Avenue 52 Intersection



Exhibit

III-16

Additional Mitigation Measures

The City shall continue to regularly monitor land use and traffic trends within the planning area, and make periodic adjustments to its roadway network through roadway improvement and maintenance management programs. This will be accomplished by conducting on-going inventories of current traffic and circulation patterns, coordinating with adjoining cities, State and regional agencies that have jurisdiction over roadways affecting the planning area, and through the phased improvement of roadway cross-sections and intersection geometries. The City may also need to consider limiting or restricting access along high volume roadways, including Highway 111, Washington Street and Jefferson Street, by combining private driveways, installing raised medians, adding turn lanes, and/or minimizing the number of turn lanes.

Through the development and implementation of Transportation Demand Management (TDM) strategies, the City will be able to extend or preserve capacity of existing roadways. TDM involves the development and implementation of goals, policies and programs that encourage the use of a wider range of transportation alternatives, including public transit and bicycles. Such techniques may include encouraging the use of car/van pooling and flex-time work schedules, and the continued utilization and expansion of public transit services. In response to the Riverside County Transportation Commissions' Congestion Management Program (CMP), the City of La Quinta has adopted a TDM ordinance.

The following mitigation measures will help assure that the City's circulation system functions at its most optimum and efficient, while keeping required improvements as cost-effective as possible.

- A. The City shall establish and maintain a master plan of roads, which sets forth detailed improvement plans and priority schedules for implementation. The goals of the plan shall be the operation of roadway segments and intersections at a V/C ratio of 0.90 and LOS D, respectively, or better.
- B. The City shall continue to coordinate and cooperate with CalTrans, CVAG, Riverside County and adjoining cities with regard to the phasing of highway improvements that assure acceptable operating levels along Interstate-10 and its interchanges, Highway 111, Highway 86, Washington Street, Jefferson Street and other major roadways serving inter-city traffic.
- C. The City shall encourage the utilization of mass/public transit, including that of the Sunline Transit Agency.
- D. Prior to the approval of development proposals, the City and developers shall confer with the Sunline Transit Agency to determine where bus turnouts and covered bus shelters shall be placed within the project and in the project vicinity.
- E. The City shall encourage resort hotels and developments to provide guest shuttle service to commercial, recreation and dining venues in the City.

- F. To minimize the number and length of vehicle trips traveled within and in the vicinity of the City, the General Plan Land Use Plan shall be maintained to provide for a balance and mix of employment and housing opportunities. In support of same, the City shall encourage the use of multi-occupant modes of transportation, and shall encourage employers to utilize telecommuting opportunities, home-based employment, and part-time or non-peak hour work schedules.
- G. The City shall prepare and adopt a comprehensive Trails Master Plan of continuous, convenient multi-use trails and bicycle routes that connect residential, commercial, schools, parks and other community activity centers. The Plan shall be coordinated with the CVAG Non-Motorized Transportation Plan and Riverside County's Eastern and Western Coachella Valley Plans, to the greatest extent practical.
- H. Development proposals and roadway improvements and plans shall comply with the current Riverside County Congestion Management Program (CMP), as defined by the Riverside County Transportation Commission, and the City-adopted TDM ordinance.
- I. The City shall consult and coordinate with the Coachella Valley Water District to assure the provision of adequate all-weather crossings along critical roadways.
- J. The City shall continue to collect traffic impact mitigation fees in accordance with its traffic mitigation and improvements program, and shall assure that appropriate fees are assessed for development projects as a means of supporting the financing of transportation infrastructure. Impact fees shall be collected prior to the issuance of building permits and may be incrementally assessed in conformance with the City program.
- K. The City shall proactively consult and coordinate with the Riverside County Airport Authority and the Palm Springs International Airport Authority to assure that local and regional airports continue to meet the City's existing and future transportation, commercial and emergency response needs.
- L. The City shall consult and coordinate with the Riverside County Airport Authority to encourage the updating of the Desert Resorts Regional Airport Master Plan, and the expansion of airport facilities to accommodate commercial traffic in the eastern Coachella Valley.
- M. The City shall continue to identify and designate image corridors throughout the City. All development proposals located within a designated image corridor shall be reviewed for compatibility with the natural and built environments to assure maximum protection of aesthetic values.
- N. The City shall incrementally implement the comprehensive Circulation Element Golf Cart Plan, which identifies minimum general design requirements for golf cart lanes, guidelines for a City-wide golf cart inspection and permitting process, uniform specifications and

symbols for signs and traffic control devices, and minimum requirements for golf cart operators. The City shall consult and coordinate with neighboring jurisdictions regarding the use of uniform signage and symbols.

- O. The City shall require, as necessary, project-specific and/or phase-specific traffic impact analyses for subdivision and other project approvals. Such analyses may be required to identify buildout and opening year traffic impacts and service levels, and may need to exact mitigation measures required on a cumulative and individual project or phase basis.

Mitigation Monitoring/Reporting Program

- A. The City shall establish a program of street and intersection monitoring that identifies facilities where capacity is at or near full utilization. Monitoring shall occur periodically, as appropriate and necessary improvements shall be incorporated into the City's five year capital improvements plan.

Responsible Parties: Public Works Department, City Engineer

- B. The City shall identify all roadway segments under its jurisdiction that warrant limiting or restricting access along high volume roadways, including Highway 111, Washington Street and Jefferson Street. Staff shall evaluate the effectiveness of combining private driveways, installing raised medians, adding turn lanes, and/or minimizing the number of turn lanes. Appropriate roadway modifications shall be incorporated into the City's five year capital improvements plan.

Responsible Parties: Public Works Department, City Engineer

- C. Every two years, the City shall confer and coordinate transportation planning activities with CalTrans, CVAG, Riverside County and adjoining cities to assure coordinated planning and construction of major roadway improvements along identified critical roadways.

Responsible Parties: Public Works Department, City Engineer

- D. Prior to the approval of subdivision maps or other City development permits, developers shall submit detailed development and preliminary roadway improvement plans to the City for approval. The plans shall be reviewed by staff to assure their compatibility with other City circulation improvement plans, the above-referenced mitigation measures, and originally approved development plans.

Responsible Parties: Developer, Consulting Traffic Engineer, Public Works Department, City Engineer, Community Development Department

- E. Internal roadway mitigation measures shall be incorporated into development designs, the inclusion of which shall be verified by the Community Development Department.

Responsible Parties: Developer, City Engineer, Public Works and Community Development Departments

- F. Development approvals shall be withheld until the City Community Development Department verifies that the developer has consulted with the Sunline Transit Agency and that public transit has been incorporated into project design to the greatest extent practical.
Responsible Parties: Developer, Sunline Transit Agency, Community Development Department, City Engineer
- G. The City shall maintain close, on-going consultation with the Riverside County Airport Authority and pro-actively work for the expansion of the Desert Resorts Regional Airport facilities to accommodate commercial traffic in the eastern Coachella Valley.
Responsible Parties: Community Development Department, City Council

D. Soils and Geology

1. Existing Conditions

The following discussion is largely based upon the geotechnical evaluation that was prepared for the La Quinta General Plan Update by Earth Consultants International.¹⁵ The report addresses geotechnical and seismic conditions in the General Plan planning area and the broader Coachella Valley, and is included in its entirety in Appendix G.

Geologic Setting

The City of La Quinta and adjacent planning area are located within the Salton Trough, a physically contiguous tectonic depression which extends from the San Geronio Pass to the Gulf of California. The Salton Trough is the landward extension of the East Pacific Rise spreading ridge and transform fault system. The formation of new surface crust at this spreading ridge is responsible for separating Baja California from mainland Mexico and creating the Gulf of California. These two plates are sliding past one another at an annual rate of about 50 mm, and the movement between them is responsible for the earthquakes that occur in southern California. Recent studies indicate that far too few earthquakes have occurred in southern California in the past 200 years to account for the rate of movement between the two plates. The data suggest that numerous moderate earthquakes, or a few large earthquakes of magnitude 7.2 or larger may occur in the near future.

Soil and Geologic Units in the Planning Area

Rocks and sediments infilling the Salton Trough provide important details about the geologic history of the area. The granite which forms the Santa Rosa Mountains and functions as the basement rock for the Coachella Valley region is estimated to have been deposited more than 65 million years ago. During the past 10,000 years, the Salton Trough has been periodically inundated with water, including ancient Lake Cahuilla which evaporated about 400 years ago, and the present-day Salton Sea. Deposition of sediments on the valley floor continues to occur today.

The planning area is generally underlain by four types of geologic deposits: granitic basement rock associated with the Santa Rosa Mountains, lacustrine deposits associated with former bodies of water, alluvial (stream) deposits shed from the mountains, and blowing sand deposits. Specifically, the planning area is comprised of six geologic units, as illustrated in Exhibit III-17. The engineering properties of each is described below.

¹⁵ "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," prepared by Earth Consultants International, November 10, 1999.

Granite (gr)

Granite is hard crystalline rock which comprises the Santa Rosa Mountains and serves as the basement rock for the Coachella Valley. This durable bedrock forms steep slopes and is typically non-water bearing, except where significantly fractured and jointed. Weathering of granite often results in the formation of rounded boulders that perch precariously on slopes and can pose a significant rockfall hazard to areas adjacent to and downgradient from these slopes. Unweathered rocks cannot be excavated easily and blasting is frequently required.

Quaternary Conglomerate (Qc)

This geologic unit is exposed at the surface along the margins of the Coachella Valley and comprises much of the Indio Hills north of the City. This conglomerate is estimated to be about 2,000 feet in thickness and plays an important role in the distribution and productivity of the region's groundwater aquifers. Since boulders exceeding 10 feet in diameter have been documented in this unit, the primary engineering concern is grading and the generation of oversized materials.

Quaternary Terrace Deposits (Qt)

These stream deposits consist of thin patches and mantles which cap older rocks and are typically up to a few feet deep, with large boulders and a gravel and sand matrix. Rather small outcrops of this unit occur along the margins of the Coachella Valley, and within the planning area immediately south of Lake Cahuilla. These deposits may produce scattered oversized material and may be moderately susceptible to wind erosion.

Interbedded Quaternary Lake and Alluvial Deposits (Ql/Qal)

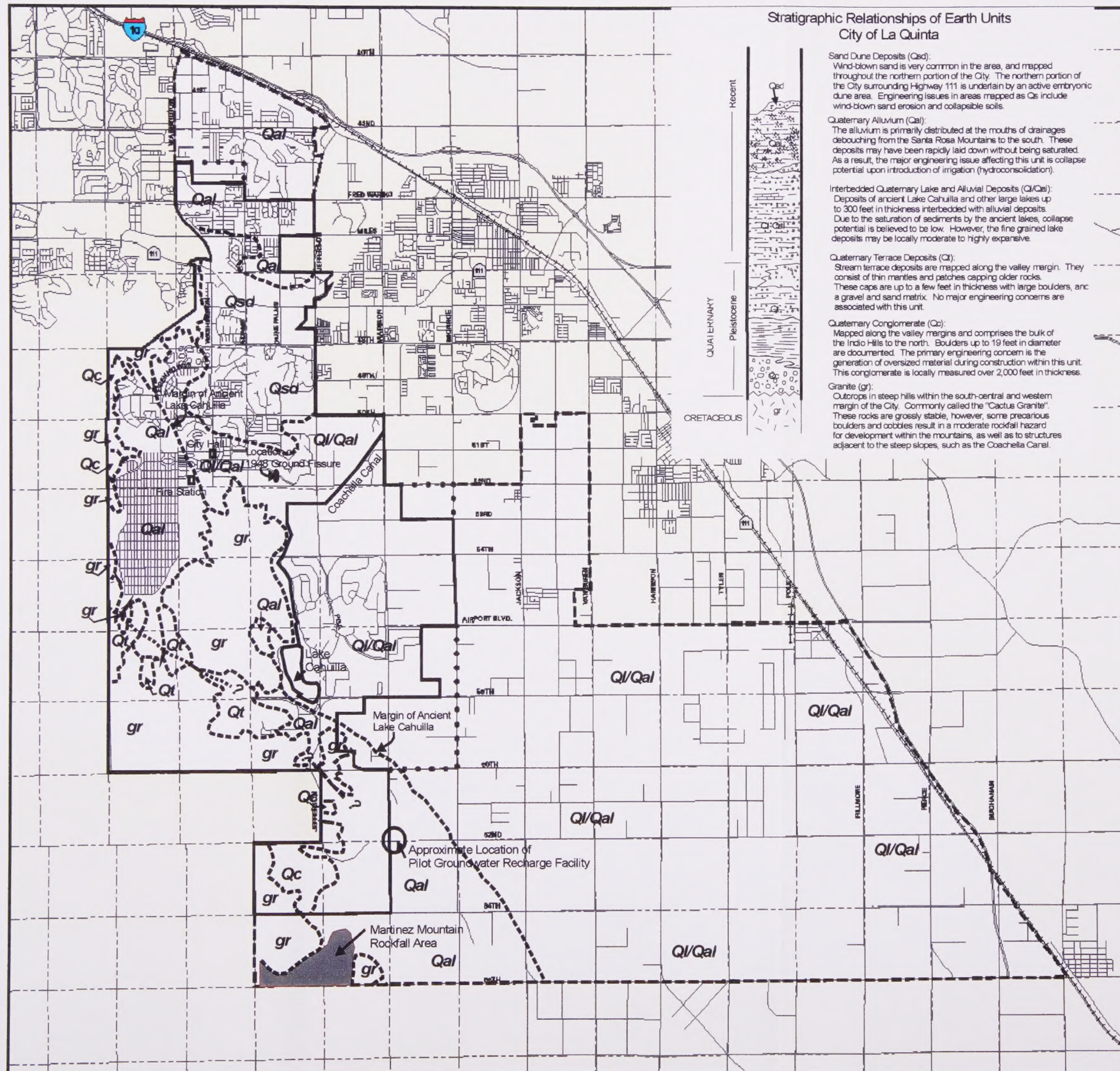
These units were deposited by ancient Lake Cahuilla and other large lakes as recently as 400 years ago. They are up to 300 feet thick and are typically inbedded with alluvial (stream) deposits. The fine-grained lacustrine (lake) deposits may be moderately to highly expansive, and therefore subject to shrink and swell.

Quaternary Alluvium (Qal)

These alluvial deposits primarily occur at the mouths of drainages emanating from the Santa Rosa and Coral Reef Mountains, and underlie older development constructed west of Eisenhower Drive. Because these sediments may have been deposited rapidly, without being saturated, the major engineering concern affecting this unit is collapse upon introduction of irrigation water (also referred to as hydroconsolidation).

Sand Dune Deposits (Qsd)

Much of the northern portion of the City is underlain with active windblown sand deposits. This unit is particularly susceptible to wind erosion and collapsible soils.



City of La Quinta General Plan

LEGEND

- Roads
- - - Township/Range Sections
- + + + + Railroads
- City Limits
- General Plan Planning Area
- • • City Sphere of Influence

Exhibit III-17 Geologic Map and Engineering Properties

Geotechnical Constraint Hazard	Physiography/ Lithology	Earth Units Affected
Wind Erosion	Active Blowing Sand and Sand Dunes	Qsd
	Wind Erosion	Qal, Ql, Qt
Ground Failure	All Valley Areas	Qal, Ql, Qsd
Expansive Soils	Fine Grained Sediments with Shrink and Swell Characteristics	Ql
Collapsible Soils	Alluvium and Wind Deposits	Qal, Qsd
Rockfall Hazard	Steep Terrain	gr

bedrock fault, dotted where buried
queried where uncertain

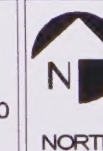
The geology illustrated herein is based upon regional mapping and should not substitute for site-specific evaluation.

*Based on regional mapping of Proctor (1968), and a compilation by Rogers (1965)

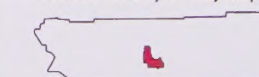
Prepared by: *Earth Consultants International for
Terra Nova Planning & Research, Inc.*

Scale

0 6,260 12,660 18,760
Feet



Riverside County Vicinity Map



Map prepared on August 23, 1999
Map prepared by: Aerial Information Systems
Map Version No. 2

Geologic Hazards

Each of the geologic units that occur at or near the surface of the planning area pose unique geologic and geotechnical constraints and opportunities, as described below.

Slope Instability

Although the granitic rock forming the City's mountainous terrain is generally stable, the weathering and steepness of the slopes can result in precarious rock formations that could fall as a result of intense seismic groundshaking or rainfall. In the City, the rockfall hazard is considered high for hillside development and development located adjacent to steeply ascending hills. The threat of mud or debris flows in the City is expected to be low, given that the City's hillside terrain is underlain by granites rather than fine-grained sedimentary rocks.

Collapsible Soils

Soil collapse, or hydroconsolidation, typically occurs in recently deposited soils in an arid or semi-arid environment. When saturated, soils experience a rearrangement of their grains and a loss of cementation, resulting in rapid and substantial settlement under relatively low loads. The weight of a structure, combined with the infiltration of water from irrigation or a rising groundwater table, can initiate settlement and cause cracking of foundations and walls, and tilting or sagging of floors.

Within the planning area, the predominantly silty soils deposited in a saturated condition on the floor of ancient Lake Cahuilla are not susceptible to collapse. However, the alluvial fan deposits from the Santa Rosa Mountains to the south, and the blowing sand deposits in the northern portion of the City are prone to collapse when exposed to heavy irrigation of lawns or plantings in close proximity to a structure's foundation.

Expansive Soils

Expansive soils are those that contain significant amounts of clay particles that have the ability to give up (shrink) or take on (swell) water. When these soils swell, the change in volume can exert significant pressures on loads created by buildings or other structures. Because of the relatively significant amounts of clay present in the lacustrine deposits of ancient Lake Cahuilla and other lakes that once inundated the Coachella Valley, expansive soils are considered a hazard in the La Quinta area.

Ground Subsidence

Ground subsidence is the gradual settling or sinking of the ground surface with little or no horizontal movement. This phenomenon is associated with the extraction of oil, gas, or groundwater from below the ground surface, but it may also occur as a result of an earthquake. Subsidence can result in the disruption of surface drainage, reduction of aquifer storage, the formation of earth fissures, and damage to wells, buildings, roads and utility infrastructure.

Ground fissuring near Avenue 52 and Adams Street in La Quinta was observed in 1948, and is believed to have been related to groundwater withdrawal in the Coachella Valley. The fissuring occurred during a period of rapid water withdrawal, before recharge of the water basin with imported Colorado River water. Currently, direct groundwater recharge in the La Quinta area is minimal, and 1996 measurements taken by the U.S. Geological Survey indicate that subsidence is

probably continuing to occur. Displacement and fissuring typically occur at or near the margin of the Coachella Valley. Because La Quinta is located at the valley margin, damage to structures as a result of regional subsidence would be expected in the City.

Mitigation of subsidence will require a regional approach to groundwater conservation and recharge. Since 1996, the Coachella Valley Water District has operated a successful pilot recharge facility south of Lake Cahuilla near Avenue 62 and Madison Street. Design of a full-scale facility is expected to begin in the next several years.

Wind Erosion and Blowsand

Much of the Coachella Valley is highly susceptible to wind erosion and the adverse impacts of blowsand. The valley floor, in particular is largely unprotected from strong winds which blow southeasterly, as they are funneled through the San Geronio Pass. Abrasive, sandy soils that comprise the valley floor are easily transported by the wind, and can pose a hazard as they abrade and damage buildings and motor vehicles, fill drainages and yards, and limit visibility on roadways. The strongest wind storms typically occur during spring months.

The primary source of sand in La Quinta is the Whitewater River. Increases in wind erosion rates in the La Quinta area are associated with episodic flooding events which change the composition of the Whitewater River drainage from a stony to sandy material. Mitigation of wind erosion in La Quinta, therefore, is associated with the reduction of flood potential of the Whitewater River. Wind erosion hazard zones in the planning area are illustrated in Exhibit III-18.

City of La Quinta General Plan

LEGEND

	Roads
	Township/Range Sections
	Railroads
	City Limits
	General Plan Planning Area
	City Sphere of Influence

- LEGEND**

	Roads
	Township/Range Sections
	Railroads
	City Limits
	General Plan Planning Area
	City Sphere of Influence

Exhibit III-18

Wind Hazard Map

EXTREME: Very severe wind erosion hazard - areas exposed to erosive winds where soils show distinct evidence of wind accumulation, and areas exposed to erosive winds where soils highly to extremely erodible by wind have been mapped.

SEVERE: Severe wind erosion hazard - areas exposed to erosive winds where soils showing distinct evidence of wind accumulation have not been mapped, but where soils moderately to highly erodible by wind have been mapped.

MODERATE: Moderate wind erosion hazard - areas partially protected from erosive winds and areas where fine-grained soils only slightly erodible by wind have been mapped.

SLIGHT: Slight wind erosion hazard - bedrock areas and areas partially to fully protected from erosive winds where the soils are coarse-grained and show little evidence of soil removal or accumulation.

Sources:

Knecht, Arnold A., 1980, Soil Survey of Riverside County, California, Coachella Valley Area: United States Department of Agriculture, Soil Conservation Service, in Cooperation with the University of California Agricultural Experiment Station, 89p. plus 19 map sheets.

Brooks, Frank L., 1967, Progress Report on the Coachella Valley Wind Erosion Problems: United States Department of Agriculture, Soil Conservation Service, prepared at the request of the Coachella Valley Soil Conservation District, 32p.

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Prepared by: Earth Consultants International for
Terra Nova Planning & Research, Inc.

Scale

0 6,260 12,660 18,760
Feet


N
NORTH



Riverside County Vicinity Map



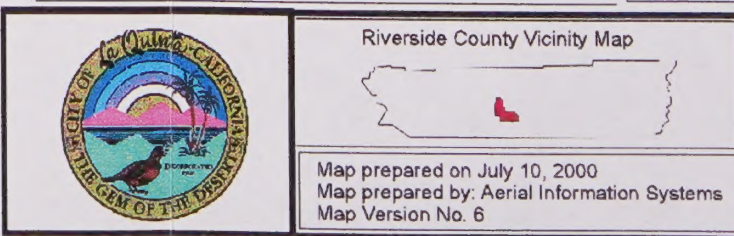
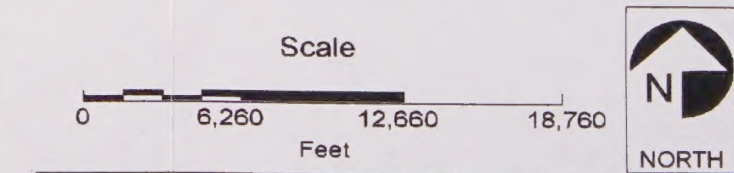
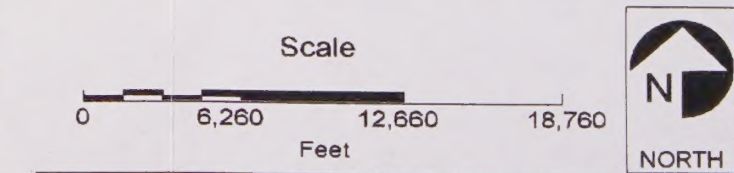
Map prepared on July 10, 2000
Map prepared by: Aerial Information Systems
Map Version No. 6

Scale

0 6,260 12,660 18,760

Feet

 NORTH



Seismic Activity

About 70 percent of the earthquakes that occur in southern California are along the San Andreas fault. The rest of the movement occurs along other northwest trending faults west of the San Andreas, and a series of faults east of the San Andreas known as the Eastern Mojave Shear Zone, which were responsible for the 1992 Landers earthquake.

The severity of an earthquake is determined by its magnitude and seismic intensity, which is an estimate of the damage caused by the earthquake at a given location. The Modified Mercalli Intensity (MMI) scale is commonly used to classify seismic intensity. The scale includes 12 levels of damage; the higher the number, the greater the damage.

Under the guidelines of the Alquist-Priolo Earthquake Fault Zoning Act, the State of California classifies faults according to the following criteria: active faults show proven displacement of the ground surface within about the last 11,000 years (Holocene); potentially active faults show evidence of movement within the last 1.6 million years. Potentially active faults are considered less likely to be the origin of an earthquake. However, most have been insufficiently studied to determine whether they are truly active or not.

No evidence of active or potentially active faulting has been found within the General Plan planning area. Given their proximity to the General Plan planning area, however, several faults have the potential to generate strong ground shaking motions that will impact the entire community. The City is located between two of California's most active faults, the San Andreas and San Jacinto.

San Andreas Fault Zone

The San Andreas fault is the principal boundary between the Pacific and North American Plates, and is comprised of three segments in southern California: the Mojave Desert, the San Bernardino Mountains, and the Coachella Valley. The San Andreas fault is located less than three miles northeast of the City of La Quinta.

The Coachella Valley segment, also referred to as the Mission Creek fault, extends from the Salton Sea to the San Geronio Pass and is the closest segment to the City of La Quinta. Paleoseismic studies indicate that the most recent rupture on this segment occurred about 300 years ago, but the average time between earthquakes is about 230 years. This segment has about a 22% probability of generating a magnitude 7.0 earthquake before the year 2024.

The San Bernardino Mountains segment is located approximately 30 miles northwest of La Quinta. This segment is a structurally complex zone because it makes a left-step to bend in a more westerly direction. The San Bernardino Mountains segment last ruptured in 1812, and has a 28% probability of failing in the next 30 years.

The Mojave segment of the southern San Andreas fault is located north of the San Bernardino Mountains segment and last ruptured in 1857. This segment is approximately 83± miles in length, and has a 26% probability of rupturing before year 2024.

San Jacinto Fault

The San Jacinto Fault Zone consists of a series of closely spaced faults that form the western margin of the San Jacinto Mountains, approximately 10 miles southwest of the City of La Quinta. The zone extends southeasterly, from its junction with the San Andreas fault in San Bernardino toward the Brawley area. The San Jacinto Fault Zone has a high level of historical seismic activity, although no great earthquakes have been produced. Its most recent surface rupturing earthquake was the 1987 event on the Superstition Hills segment. The slip rate of the San Jacinto fault is estimated between 7 and 17 mm/year, and it is capable of generating magnitude 6.5 to 7.5 earthquakes.

Elsinore Fault

The Elsinore Fault zone is located about 30 miles southwest of the City of La Quinta, and has historically been one of the quietest of the largest fault zones in southern California. The fault has a slip rate of about 5.0 mm/year and breaks in a major ground rupturing earthquake on average about every 400 years. It is capable of producing magnitude 6.5 to 7.5 earthquakes.

Earthquake Hazard Design Scenarios

A maximum probable earthquake (MPE) is the largest earthquake a fault is predicted to be capable of generating within a specific time period. The MPE is most likely to occur within the life span of most development, and is commonly used in assessing seismic risk in a particular area. The MPE for the City of La Quinta is a magnitude 7.2 earthquake generated by the San Jacinto fault or the Coachella Valley segment of the San Andreas fault. Such an event would be expected to damage vulnerable structures, including potentially hazardous buildings, and result in localized ground failures in the City. However, given the City's relatively modern building stock, the threat to lives and property is expected to be substantially less than potential economic losses.

The Maximum Credible Earthquake (MCE) is the largest earthquake a fault is capable of generating. It represents a worst-case scenario and is often considered in emergency planning and the design of critical facilities such as fire stations, hospitals and dams. The MCE for the City of La Quinta may be a magnitude 8.0 if the entire southern San Andreas should rupture in a single large earthquake. If such an event were to occur, damage to the City would be extensive, although loss of life would be expected to be low due to the City's predominantly modern building stock.

Seismically Induced Geologic Hazards

In addition to direct impacts such as ground acceleration and surface rupture, other seismically induced hazards can impact the community and its structures. Some of these hazards include liquefaction, seismically induced settlement, landslides and rockfalls, each of which is discussed below.

Liquefaction

Liquefaction generally occurs when loose, saturated, sandy soils are subjected to Modified Mercalli Intensities of VII and higher. Significant ground shaking increases water pressure in the pores between soil particles, causing soils to lose cohesion and to "liquefy." Liquefaction can result in structural failure due to settlement, loss of bearing capacity of foundation soils, the buoyancy of buried structures and water seepage through ground cracks.

Liquefaction is not a random phenomenon and requires certain geologic and hydrologic conditions to occur, including recently deposited sands and silts in areas with high groundwater levels. The eastern portion of the planning area is particularly susceptible to liquefaction because of its shallow depth to groundwater, generally less than 30 feet below the surface. Liquefaction hazards in the planning area are illustrated on Exhibit III-19.

Site-specific geotechnical studies are the most reliable method of determining the liquefaction potential of a site. General approaches to mitigating potential liquefaction hazards include, but are not limited to avoidance of development on areas susceptible to liquefaction, stabilization of ground materials through compaction or replacement of soils, and designing structures to resist liquefaction by attachment to ground soils.

Seismically Induced Settlement

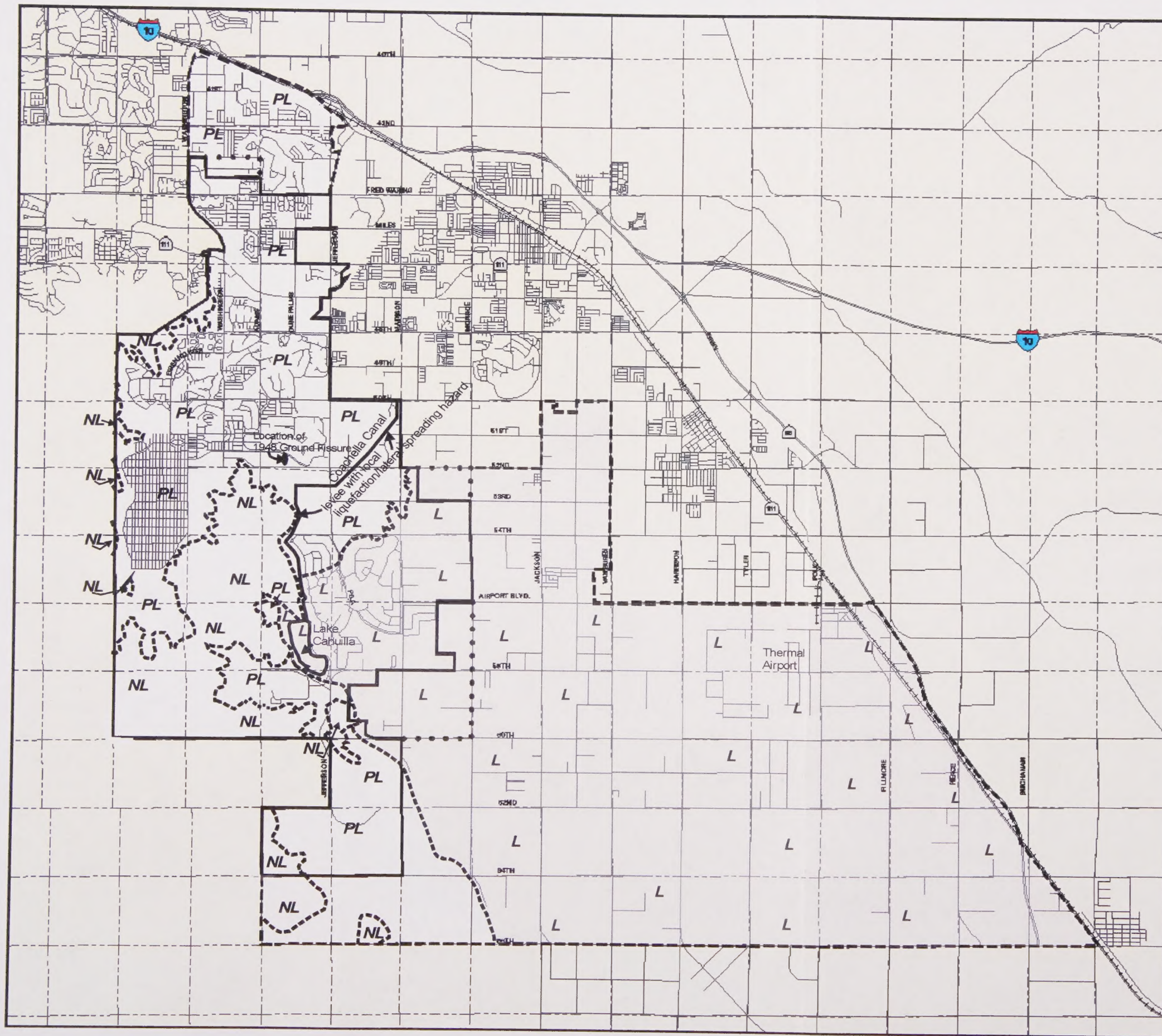
Seismic ground shaking can cause the compaction or densification of soils, resulting in local settlement and damage to structures and foundations, or regional damage to water and sewer lines. The potential for this to occur is dependent upon the intensity and duration of ground shaking and the density of subsurface soils. Loose sediments, including windblown or recently deposited alluvial sands in the planning area are particularly subject to seismically induced settlement. As illustrated in Exhibit III-20, much of the valley floor in the planning area is vulnerable to seismically induced settlement.

Seismically Induced Slope Instability

It is not uncommon for major earthquakes to result in large-scale landslides and rock falls. Very steep, potentially unstable slopes are located on the western and southern margins of the City of La Quinta. Seismically induced landslides, rock falls and rock slides can be expected to occur on the steep slopes along the southern and western portions of the City, and development in close proximity to the base of these slopes are vulnerable to these hazards. Exhibit III-20 identifies those areas within the planning area where rockfall is considered a hazard.

Seismically Induced Inundation

Localized flooding can result from the structural failure of water tanks, reservoirs, canals, recharge basins and other water retention structures during a seismic event. In the planning area, these structures include Lake Cahuilla, small golf course lakes, above-ground water reservoirs, and recharge basins southeast of Lake Cahuilla. This hazard is dependent on specific earthquake parameters, including the frequency of seismic waves and distance from the epicenter, as well as site-specific design of the enclosed bodies of water. Damage to these structures could pose an inundation hazard if they contain water at the time of the earthquake, and could hinder fire suppression efforts and limit the supply of potable water after an earthquake.



City of La Quinta General Plan

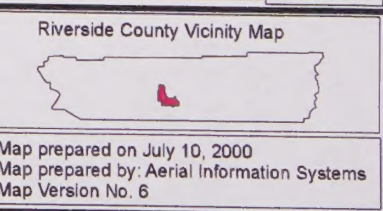
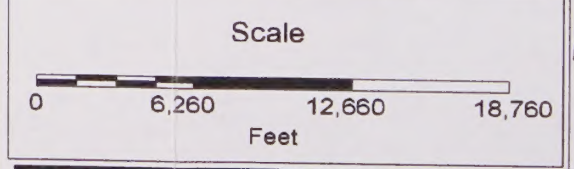
LEGEND

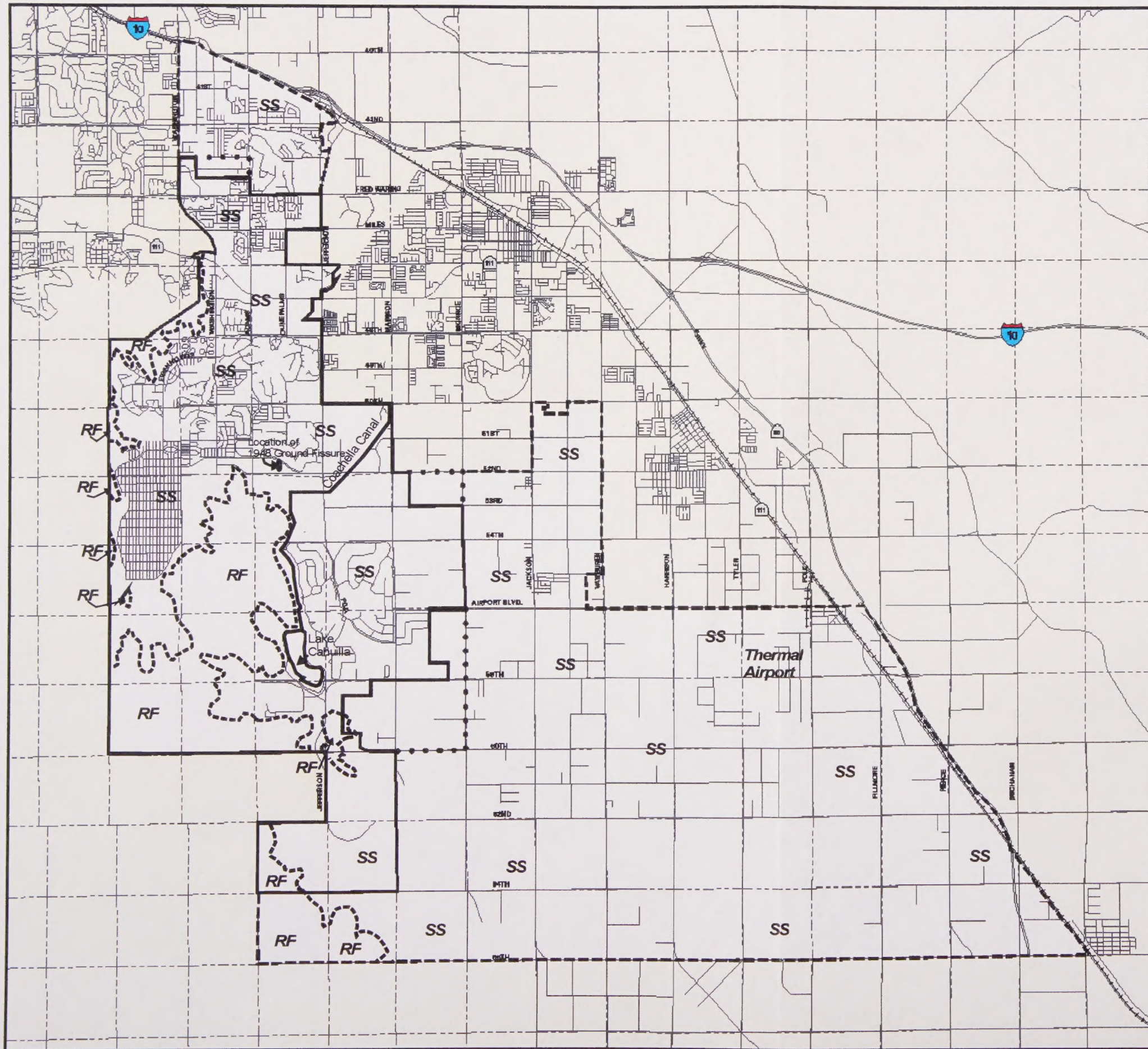
- Roads
- - - Township/Range Sections
- Railroads
- City Limits
- - - General Plan Planning Area
- ... City Sphere of Influence

Exhibit III-19 Liquefaction Susceptibility

- L** Liquefaction hazard due to coexistence of young sediments and ground water that may be within 30 feet of the surface.
- PL** Potential liquefaction hazard due to the presence of young sediments, however, ground water is generally more than 30 feet below the surface.
- NL** Not liquefiable, regions underlain by granitic bedrock.

Prepared by: *Earth Consultants International for Terra Nova Planning & Research*





City of La Quinta General Plan

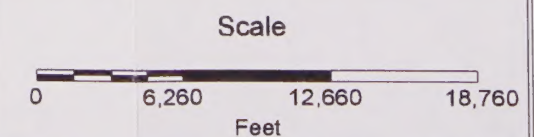
LEGEND

- Roads
- Township/Range Sections
- Railroads
- City Limits
- General Plan Planning Area
- City Sphere of Influence

Exhibit III-20 Seismically Induced Settlement and Rockfall Susceptibility

- SS** Region vulnerable to seismically induced settlement. Differential settlements are most likely to occur along valley margins.
- RF** Region vulnerable to seismically induced rockfall.

Prepared by: Earth Consultants International for
Terra Nova Planning & Research



Riverside County Vicinity Map



Map prepared on July 10, 2000
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Map Version No. 6



2. Project Impacts

General Plan buildout will involve the development of major and minor projects, ranging from permits for single family additions to Specific Plans consisting of mixed residential, commercial, resort and industrial land uses. Some development may require extensive site grading and earthwork which could impact existing topography. Groundshaking associated with regional faults will continue to pose a threat to future development. Other potential impacts associated with development of the planning area are discussed below.

Soils

Areas of the City and planning area that have a moderate to high susceptibility to rockfall and landslides are generally limited to the slopes of the Santa Rosa and Coral Reef Mountains, and development adjacent to them. Development in these areas will be subject to the City's Hillside Conservation Zone Ordinance, which regulates development on slopes and hillside areas. Development on the Valley floor adjacent to steep hillsides must be required to assess the potential impacts of rockfall prior to construction of structures, so that mitigation measures can be implemented on a site-specific basis.

Alluvial fan deposits shed from the Santa Rosa Mountains and blowing sand deposits in the northern planning area are vulnerable to collapse and/or hydrocompaction. When saturated, these soils could experience a rearrangement of their individual grains, resulting in a loss of cementation and damage to structures and foundations that are built upon them. In areas proposed for development, site-specific studies must be conducted to evaluate the collapse potential.

Lacustrine deposits associated with ancient Lake Cahuilla contain relatively significant amounts of clay, and therefore could be moderately to highly expansive. Expansion testing and mitigation are currently required in the City's grading and building codes, and need to continue to be enforced.

Subsidence in the Coachella Valley is closely associated with groundwater overdraft. A ground fissure resulting from subsidence has been documented in La Quinta in the past, and future ground fissures have the potential to occur throughout much of the City. Structures sensitive to slight changes in elevation, such as canals, sewers and drainage improvements are generally sensitive to the effects of subsidence and may be damaged if subsidence occurs. Mitigation of subsidence and its potential impacts will require a regional approach to groundwater conservation and recharge.

The northern portion of the planning area is highly susceptible to wind erosion. Increased development and surface disruption resulting from grading and construction loosens soils and increases the amount of dust and other small particles in the air. However, in the long-term, the installation of landscaping associated with new development will contribute to the stabilization of drifting sand. The City currently requires the preparation of erosion control plans as part of the grading permit process, providing site-specific mitigation for this hazard with each development. Project-specific erosion control measures must continue to be implemented to protect on-site soils. The potentially adverse health impacts associated with suspended dust and blowsand are further discussed in Section III-I, Air Quality.

Seismicity

Although the planning area does not contain any known active or potentially active faults, it is located in close proximity to the San Andreas and San Jacinto Fault Zones, and is vulnerable to the effects of strong seismic groundshaking. Geologic analysis of the San Andreas Fault Zone indicates that these segments have a moderate probability (22 to 28%) of generating a moderate to large earthquake before year 2024.

Earthquakes can cause substantial property damage, the loss of public services and facilities, and loss of life. Strong groundshaking can also trigger slope instability, liquefaction, settlement and flood inundation, and can cause a variety of localized, but not less destructive hazards such as urban fires, dam failures, and toxic chemical releases. Mobile homes may be shifted off their foundations, resulting in rupture gas lines and subsequent fires.

Most injuries and loss of life that result from an earthquake are the result of the collapse of hazardous buildings and other structures, which may include buildings constructed prior to improved building codes, unreinforced masonry buildings and soft-story buildings. The City of La Quinta Department of Building and Safety adopted the 1997 Uniform Building Code (UBC) in July 1999. New development in the City will be subject to this, or later versions of the UBC and/or International Building Code, and should be able to resist major earthquakes without collapsing, although structural damage could occur. As a result of previous earthquakes in southern California, state law was passed which required that unreinforced masonry buildings be documented, reinforced or demolished. Older buildings in the City and County have been documented, as required by law, and mitigation measures already implemented. The potential impacts from older buildings in the City and planning area, therefore, should not be significant.

Liquefaction

Liquefaction is defined as the total or substantial loss of shear strength in saturated, fine-grained, sand soils. It can cause structural distress or failure as a result of excessive settlements, a loss of bearing capacity in the foundation soils, and the buoyant rise of buried structures. Liquefaction susceptibility is considered high within the eastern portion of the planning area, and moderate in the central and northern planning area. However, isolated areas could liquefy during an earthquake if the soil and groundwater conditions are conducive to failure (for example, if loose and unconsolidated soils are saturated). These conditions could develop locally near water retention or groundwater recharge basins, such as the Coachella Canal. Mitigation measures must be implemented to reduce the potential risk associated with liquefaction in the planning area.

Seismically Induced Slope Instability

Areas in the planning area that have a moderate to high susceptibility to rockfall are generally limited to the steep slopes of the Santa Rosa and Coral Reef Mountains, and development adjacent to them. Local roads adjacent to the slopes could be blocked by fallen rock debris immediately following an earthquake, which could hinder rescue and evacuation operations. Manufactured slopes of significant height could also be susceptible to failure and should be engineered to resist seismically induced failure.

Seismically Induced Inundation

Strong groundshaking could also result in structural damage or failure of water tanks, canals, retention/detention basins, and other enclosed bodies of water, including Lake Cahuilla. Damage to above-ground water tanks may include bulging at the bottom of water tanks, shearing off of pipes, and damage to the roof and shell. Water released from these structures could result in local flooding and could impact structures downgradient. Based on the size and capacity of Lake Cahuilla and its surrounding levee system, it may be eligible for structural safety evaluation under the California Division of Safety of Dams.

Proposed Annexation No. 12 and Sphere of Influence Amendment

Although it is unlikely that a substantial amount of development will occur within the proposed annexation and sphere of influence areas in the near-term, a variety of projects, ranging from low to high-density residential projects and commercial development, to major community facilities, are expected to be constructed over the long-term. Such development will require grading, earthwork, and the construction of new structures, which may expose people and/or structures to a number of potential geologic hazards.

Given the proximity of the annexation and SOI areas to the San Andreas and San Jacinto Fault Zones, and the associated potential for significant ground shaking, the construction of new buildings in these areas will increase the potential for human injury, loss of life, and property damage. However, these threats can be substantially minimized with the application of appropriate mitigation measures, including strict adherence to the latest version of the Uniform Building Code and/or International Building Code.

The proposed annexation and SOI amendment areas are located within the boundaries of Ancient Lake Cahuilla, and the underlying soils in these areas are largely composed of interbedded quaternary lake and alluvial deposits. These fine-grained lacustrine and alluvial deposits may be moderately to highly expansive, and given their ability to shrink and swell, can exert significant pressures on loads created by buildings or other structures and result in structural damage. Due to the presence of loose, sandy, unsaturated soils and a relatively shallow depth to groundwater, the annexation and SOI amendment areas are highly susceptible to liquefaction, collapsible soils, and seismically induced settlement. Seismic ground shaking within or in the vicinity of the City may initiate these phenomena and could result in damage to buildings, structural foundations, water and sewer lines, and other subsurface improvements. The threat of soil collapse could be increased where a rising or shallow groundwater table is allowed to infiltrate a structure's foundation.

As illustrated in Exhibit III-18, the annexation and SOI areas are also subject to moderate to extreme wind erosion hazards. Motor vehicles, buildings, and other structures may experience moderate to severe abrasion, visibility may be reduced, and drainages and yards may be filled with blowsand. However, over the long-term, continued development in the annexation and SOI areas may actually mitigate some of the impacts of blowsand. The construction of buildings, landscape treatments, streets, sidewalks and other paved surfaces may help stabilize the loose, unsaturated soils that characterize this portion of the planning area and thereby create barriers to blowing sand. The mitigation measures described below are applicable to all development projects occurring within the annexation and SOI amendment areas.

Without mitigation, buildout of the General Plan, Annexation No. 12 and the Sphere of Influence Amendment will result in significant impacts associated with soils and geology.

3. Mitigation Measures

In order to ensure that impacts associated with soils and geology are reduced to a less than significant level, the following mitigation measures shall be implemented:

- A. The City shall investigate the possibility that Lake Cahuilla may be eligible for structural safety monitoring by the California Division of Dam Safety, and shall coordinate with the Division in this regard, as appropriate.
- B. Proper structural engineering, which takes into account the forces that will be applied to structures by anticipated ground motions, shall provide mitigation for ground shaking hazards. Seismic design shall be in accordance with the most recently adopted editions of the Uniform Building Code and/or International Building Code, and the seismic design parameters of the Structural Engineers' Association of California.
- C. The City's Emergency Preparedness staff shall undertake and maintain a seismic hazard reduction program which should consist of the identification and mapping of geologic and seismic hazards, the expedient retrofitting and rehabilitation of weak or damaged structures, and the enforcement of fire and building codes. Programs that help City residents provide for themselves after a seismic event should also be maintained.
- D. Proposals for development on wind or stream-deposited sediment on the valley floor shall include site-specific subsurface geotechnical investigations that address settlement, liquefaction, and collapsible soils. These hazards can generally be mitigated by proper excavation, compaction and foundation design.
- E. The City shall continue to require expansive soils testing as part of its grading and building codes, and shall assure the implementation of mitigation measures which minimize these hazards, such as the use of reinforcing steel in foundations, drainage control devices, overexcavation and backfilling with non-expansive soils.
- F. The City shall continue to support and encourage local and regional groundwater conservation measures in an effort to mitigate potential subsidence resulting from groundwater overdraft (see also Water Resources discussion in Section III-F).
- G. All grading permit requests shall include a soil erosion prevention plan. Blowing dust and sand during grading operations shall be mitigated by adequate watering of soils prior to and during grading, and limiting the area of dry, exposed soils during grading. To mitigate against the effects of wind erosion after site development, a variety of measures shall be provided including maintaining moist surface soils, planting stabilizing vegetation, establishing windbreaks with non-invasive vegetation or perimeter block walls, and using chemical soil stabilizers (see also Air Quality discussion in Section III-I).

- H. Where development is proposed adjacent to or in close proximity to steep slopes, site-specific geotechnical studies shall be conducted to evaluate the potential for rock falls and/or landslides, and to establish mitigation measures which minimize these hazards.
- I. During site grading, all existing vegetation and debris shall be removed from areas that are to receive compacted fill. Any trees to be removed shall have a minimum of 95% of the root systems extracted. Man-made objects shall be overexcavated and exported from the site. Removal of unsuitable materials may require excavation to depths ranging from 2 to 4 feet or more below the existing site grade.
- J. All fill soil, whether on site or imported, shall be approved by the individual project soils engineer prior to placement as compaction fill. All fill soil shall be free from vegetation, organic material, cobbles and boulders greater than 6 inches in diameter, and other debris. Approved soil shall be placed in horizontal lifts of appropriate thickness as prescribed by the soils engineer and watered or aerated as necessary to obtain near-optimum moisture content.
- K. Fill materials shall be completely and uniformly compacted to not less than 90% of the laboratory maximum density as determined by ASTM test method D-1557-78. The project soils engineer shall observe the placement of fill and take sufficient tests to verify the moisture content, uniformity, and degree of compaction obtained. In-place soil density should be determined by the sand-cone method, in accordance with ASTM Test Method D-1556-64 (74), or equivalent test method acceptable to the City Building and Safety Department.
- L. Finish cut slopes generally shall not be inclined steeper than 2:1 (horizontal to vertical). Attempts to excavate near-vertical temporary cuts for retaining walls or utility installations in excess of 5 feet may result in gross failure of the cut and may possibly damage equipment and injure workers. All cut slopes must be inspected during grading to provide additional recommendations for safe construction.
- M. Finish fill slopes shall not be inclined steeper than 2:1 (horizontal to vertical). Fill slope surfaces shall be compacted to 90% of the laboratory maximum density by either over-filling and cutting back to expose a compacted core or by approved mechanical methods.
- N. Retaining walls shall be constructed to adopted building code standards and inspected by the building inspector.
- O. Foundation systems that utilize continuous and spread footings are recommended for the support of one and two-story structures. Foundations for higher structures must be evaluated based on structure design and on-site soil conditions.
- P. Positive site drainage shall be established during finish grading. Finish lot grading shall include a minimum positive gradient of 2% away from structures for a minimum distance of three (3) feet and a minimum gradient of 1% to the street or other approved drainage course.

- Q. An adequate subdrain system shall be constructed behind and at the base of all retaining walls to allow for adequate drainage and to prevent excessive hydrostatic pressure.
- R. Utility trench excavations in slope areas or within the zone of influence of structures should be properly backfilled in accordance with the following recommendations:
- a) Pipes shall be bedded with a minimum of 6 inches of pea gravel or approved granular soil. Similar material shall be used to provide a cover of at least 1 foot over the pipe. This backfill shall then be uniformly compacted by mechanical means or jetted to a firm and unyielding condition.
 - b) Remaining backfill may be fine-grained soil. It shall be placed in lifts not exceeding 6 inches in thickness or as determined appropriate, watered or aerated to near optimum moisture content, and mechanically compacted to a minimum of 90% of the laboratory maximum density.
 - c) Pipes in trenches within 5 feet of the top of slopes or on the face of slopes shall be bedded and backfilled with pea gravel or approved granular soils as described above. The remainder of the trench backfill shall comprise typical on-site fill soil mechanically compacted as described in the previous paragraph.

Mitigation Monitoring/Reporting

- A. During any project site preparation, the City Engineer and Building Department staff shall conduct site inspections to ensure compliance with applicable City ordinances and conditions of approval, as well as any additional erosion control mitigation measures specified in this document.
Responsible Parties: City Engineer, Building Department, developer, grading contractor.
- B. Subsequent to preparation of final development plans and specifications, but prior to grading and construction, the foundation plans should be reviewed by the geotechnical consultant and/or the City Engineer to verify compatibility with site geotechnical conditions and conformance with recommendations contained herein. The need for additional sub-surface exploration will be determined on a project by project basis.
Responsible Parties: City Engineer, geotechnical consultant.
- C. When appropriate, rough grading of a project site shall be performed under geological and engineering observation of the geological consultant and/or the City Engineer. Rough grading includes, but is not limited to, grading of overexcavation cuts, fill placement, and excavation of temporary and permanent cut slopes.
Responsible Parties: City Engineer, geotechnical consultant.
- D. As determined appropriate by the City Engineer and consulting geologist, the geotechnical consultant and/or the City Engineer shall perform the following observations during site grading and construction of foundations to verify or modify, if necessary, conclusions and recommendations in the project's geotechnical report:

1. Observation of all grading operations.
2. Geologic observation of all cut slopes.
3. Observation of all key cuts and fill benching.
4. Observation of all retaining wall back cuts, during and following completion or excavation.
5. Observation of all surface and subsurface drainage systems.
6. Observation of backfill wedges and subdrains for retaining walls.
7. Observation of pre-moistening of subgrade soils and placement of sand cushion and vapor barrier beneath the slab.
8. Observation of all foundation excavations for the structure or retaining walls prior to placing forms and reinforcing steel.
9. Observation of compaction of all utility trench backfill.

Responsible Parties: City Engineer and/or geotechnical consultant.

E. Hydrology

1. Existing Conditions

The Coachella Valley and City of La Quinta are located within a low desert basin which isolates the region from moist and cool maritime air masses coming on shore to the west, creating a subtropical desert climate. Mean annual rainfall is very low on the desert floor, ranging from 4 to 6 inches per year. In some years, no measurable rainfall has been reported. Precipitation generally occurs during winter months, between December and March. Rainfall on surrounding mountain slopes generally increases with elevation, while temperatures generally drop about 5° F with every 1,000 foot increase in elevation.

Although average rainfall in the region is low, occasional high-intensity thunderstorms and tropical storms, which occur primarily during late summer and early fall, are capable of creating flash floods. Rainfall of sufficient intensity and quantity is capable of saturating dry ground surfaces, substantially reducing percolation rates and increasing runoff. Impervious surfaces associated with development also contribute to rainwater runoff. In the Coachella Valley, flash flooding is generally limited to washes extending from mountain canyons, floodway and floodplains adjacent to rivers and low-lying drainages. Flooding on alluvial fans can be particularly damaging because floodwaters move at high velocities and spread across wide, unchannelized areas. Given that portions of the City are located on alluvial fans, the hazard posed by flooding is significant if not mitigated.

Flooding can also result when unusually warm conditions in early spring cause the snow pack on adjacent mountains to melt quickly. In fact, most of the surface water in the Coachella Valley is derived from snow melt off the slopes of the San Bernardino, Little San Bernardino and San Jacinto Mountains. The water is usually absorbed by porous sands and gravels on the valley floor and continues to flow underground. However, if surface sediments are already saturated, additional runoff can remain on the surface and result in minor to major flooding.

Historic data indicate that major storm events have occurring the Coachella Valley. The Army Corps of Engineers' benchmark storms include the storm of September 24, 1939. The thunderstorm preceded a major storm off the western coast of Mexico, was centered over Indio, and generated 6.45 inches of rain in a 6-hour period. Tropical storm Kathleen, which occurred from September 9 to 11, 1976, generated very heavy rainfall over a three county area. As much as 14 inches of rain fell onto surrounding hills and mountains, draining into the valley and contributing to excessive flood damage in desert communities. The flood hazard in the City of La Quinta planning area is primarily associated with storm flooding on the alluvial fans that drain the San Bernardino and Little San Bernardino Mountains.

Regional Stormwater Management

The Coachella Valley Water District (CVWD) is responsible for the management of regional drainage facilities which convey runoff originating outside the City. CVWD's management efforts are primarily focused on rivers, major streams and their tributaries, and areas characterized by significant sheet flows. The District is empowered with broad management functions, including flood control planning and the construction of drainage improvements for regional flood control facilities. In the planning area, these facilities include the Coachella Valley Stormwater Channel (Whitewater River), La Quinta Evacuation Channel and Bear Creek Channel system.

Local Drainage Management¹⁶

The management of local drainage is the direct responsibility of the City. A draft Master Plan of Drainage was prepared by the City several years ago, but has not been adopted. Nonetheless, it is used as a useful guide for directing future stormwater management improvements. The City's drainage system currently consists of a network of recently retrofitted storm drains, ranging from 18 to 60 inches in diameter, within the rights-of-way of streets in the Cove. Additional street improvements, including curbs and gutters and possibly storm drains, are currently in the design phase and are expected to be installed in the Downtown Village area within the next several years.

Since its incorporation, the City has required that new development construct on-site retention and/or detention basins capable of managing 100-year stormwater flows. Development which is immediately adjacent to the Coachella Valley Stormwater Channel has the option of conveying runoff directly into this facility.

Major Flood Control Facilities

A number of flood control projects have been constructed to manage regional and site-specific drainage in the community. Such improvements include levees, stormwater channels, debris basins and detention/retention basins. The costs and methods of planning and constructing flood control projects are weighed against the economic impacts likely to result from major flood events.

Coachella Valley Stormwater Channel

The Whitewater River is the principal drainage for the upper Coachella Valley and the City. It flows southeast through La Quinta, then northeast through the City of Indio, where it bends southeast again, eventually draining into the Salton Sea about 40 miles southeast of the City. The river has a total drainage area of approximately 850 square miles upstream of La Quinta. East of Washington Street, the Whitewater River is a man-made channel known as the Coachella Valley Stormwater

¹⁶ Steve Speer, Engineer, City of La Quinta, July 16, 1999.

Channel, which is maintained by CVWD. The channel is unlined in most locations, with levees extending about ten feet above the ground. The channel also extends north-south through easterly portion of the planning area, in the vicinity of Highway 111.

La Quinta Evacuation Channel

The La Quinta Evacuation Channel conveys runoff from the Upper Bear Creek drainage system and East La Quinta Channel (see below) to the Coachella Valley Stormwater Channel. It extends in a northeasterly direction and is approximately 3.5 miles in length.

Upper Bear Creek Drainage System

The Upper Bear Creek drainage system protects the Cove from runoff emanating from the Santa Rosa Mountains. The system consists of the Upper Bear Creek Training Dike, Upper Bear Creek Detention Basin, Bear Creek Channel, and four side drainage inlets. It extends along the southerly and westerly edges of the Cove and is designed to manage stormwater flows from a 100-year flood event. The Upper Bear Creek Training Dike captures runoff from a drainage area of approximately 1.7 square miles. Runoff is then conveyed to the Upper Bear Creek Detention Basin, which has a storage capacity of 752 acre-feet. Outflows enter the Bear Creek Channel, which extends approximately 2.5 miles in length along the westerly edge of the Cove. Stormwater collects in the Oleander Reservoir and is conveyed to the La Quinta Evacuation Channel, where it eventually discharges into the Coachella Valley Stormwater Channel.

East La Quinta Channel

The East La Quinta Channel extends along the easterly edge of the Cove and protects the Cove from runoff generated by the Santa Rosa and Coral Reef Mountains. The system includes the Calle Tecate and Avenida Bermudas Detention Basins, which capture and retain mountain runoff. During a 100-year storm, excess runoff is discharged to the La Quinta Evacuation Channel through a 60-inch underground pipe.

Lake Cahuilla

Lake Cahuilla is the terminal reservoir of the Coachella Branch of the All-American Canal, which provides irrigation water to agricultural lands in the eastern Coachella Valley. The lake was constructed in 1969 to serve as a reserve supply of irrigation water. It is located between Avenues 56 and 58, west of Jefferson Street, adjacent to the foothills of the Santa Rosa Mountains. Lake Cahuilla is contained within the Lake Cahuilla County Park, which is operated and maintained by the Riverside County Parks and Open Space District, which leases the lands from the Coachella Valley Water District.

Lake Cahuilla encompasses approximately 135 acres, is between 11 and 12 feet deep, and contains about 1,500 acre-feet of water. It is cement-lined, and the bottom of the lake is sealed with six inches of compacted soil-cement. The levee system around the lake includes dikes 25 feet high and 100 feet wide. These levees may be impacted by a severe earthquake that results in lateral spreading of the foundation soils. Based on its total storage capacity and the extent of its levee system, Lake Cahuilla may be eligible for monitoring by the California Division of Safety of Dams. This agency monitors the structural safety of dams greater than 25 feet in height or 50 acre-feet in storage capacity.

Flood Hazard Areas

The Federal Emergency Management Agency (FEMA) is responsible for the analysis and mapping of areas prone to flooding in the United States. FEMA has developed a series of Flood Insurance Rate Maps (FIRM) that identify areas subject to flooding from 100-year and 500-year storm events and serve as the basis for determining the need for federal flood insurance. A 100-year flood event is defined as a flood which has a 1/100 change of occurring in any one year, and a 500-year flood has a 1/500 change of occurring in a given year. The recurrence interval represents a long-term average period between floods of a given magnitude, but floods could and do occur at shorter time intervals, occasionally within the same year. Flood zones designated on the FIRM maps include the following:

- Zone A:** Areas of 100-year flood; base flood elevations have not been determined.
- Zone AO:** Special Flood Hazard Areas inundated by types of 100-year shallow flooding where depths are between 1.0 and 3.0 feet; depths are shown, or areas of 100-year alluvial fan flooding, depths and velocities are shown, but no flood hazard factors are determined.
- Zone B:** Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot, or where the contributing drainage areas is less than one square mile; or areas protected by levees from the base flood.
- Zone C:** Areas lying outside the boundaries of the 100-year and 500-year flood plains and generally considered safe from flooding.

The City of La Quinta participates in the National Flood Insurance Program, and consequently, FIRM maps have been prepared for the La Quinta area. A compilation of data from 1991 FIRM Community Panels is presented in Exhibit III-21.

City of La Quinta General Plan

LEGEND

- Roads
- - - Township/Range Sections
- + + + Railroads
- City Limits
- - - General Plan Planning Area
- · · City Sphere of Influence

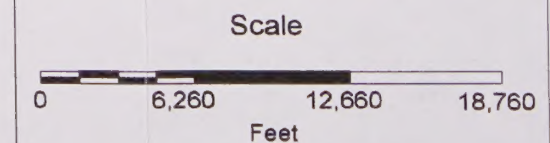
Exhibit III-21 Flood Hazard Map

 Area projected to be inundated by a 100 year flood event

 Boundary of area projected to be inundated by a 500 year flood event

Mapping based on Federal Emergency Management Agency (FEMA), 1991, Flood Insurance Rate Maps for the City of La Quinta, Community Panels 060709-0005-B, and 060709-0010-B.

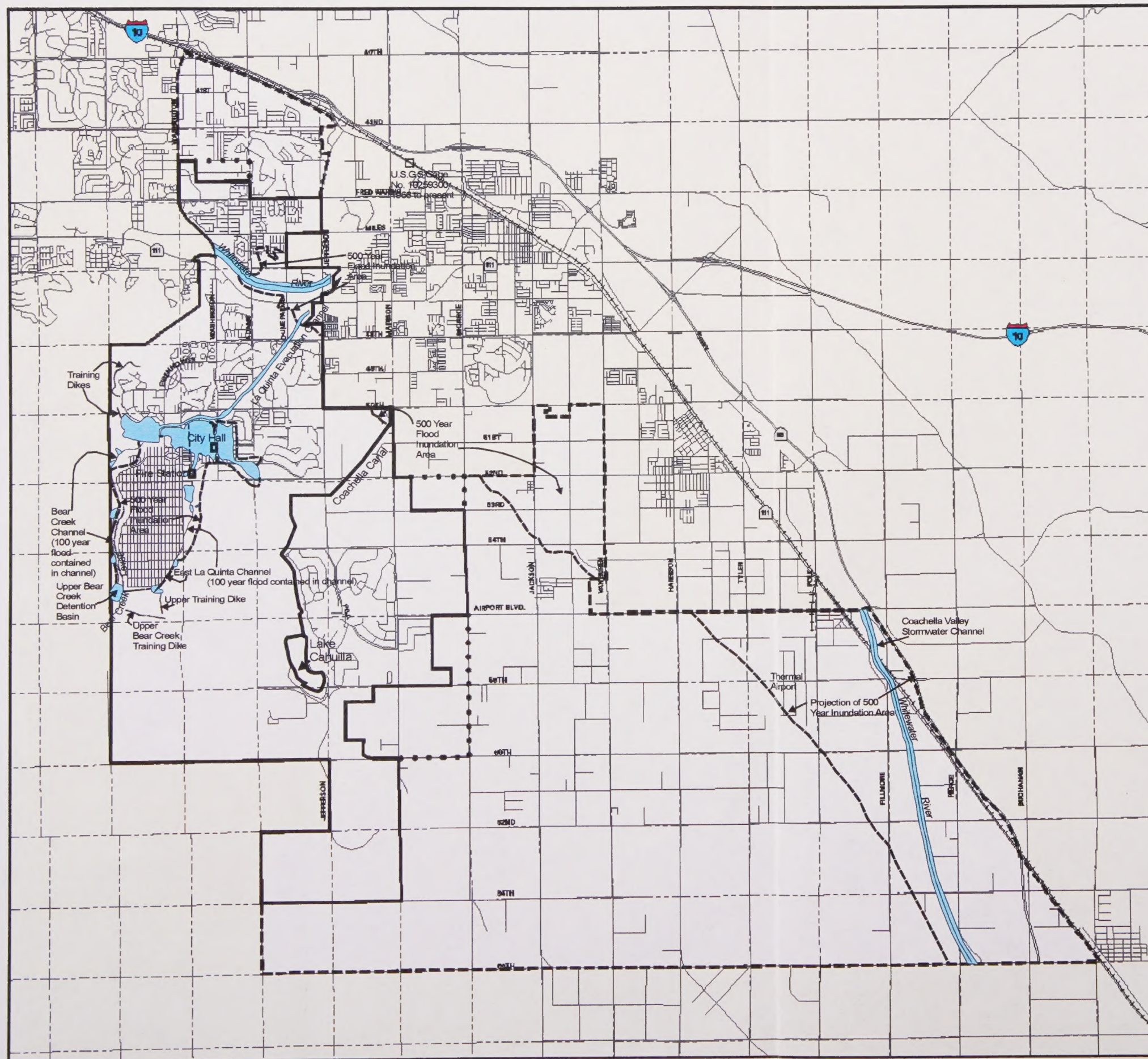
Prepared by: *Earth Consultants International for Terra Nova Planning & Research, Inc.*



Riverside County Vicinity Map



Map prepared on July 10, 2000
Map prepared by: Aerial Information Systems
Map Version No. 6



As illustrated on Exhibit III-21, lands in the vicinity of Washington Street and Eisenhower Drive, south of the La Quinta Evacuation Channel, are contained within the 100-year floodplain. This includes the City Hall building on Calle Tampico and Fire Station #32 at Avenida Bermudas and Frances Hack Lane. The 100-year flood is also contained within the City's major drainage systems, including the La Quinta Evacuation Channel, and the retention/detention basins that comprise the Bear Creek Channel and East la Quinta Channel systems. The 100-year flood is also contained within the Coachella Valley Stormwater Channel, where it passes through the City north of Highway 111, and where it passes through the easterly portion of the planning area near Thermal.

The 500-year flood is projected to inundate the entire Cove area, as well as lands adjacent to the Coachella Valley Stormwater Channel north of Highway 111. The 500-year floodplain is also expected to impact a relatively large area adjacent to the Coachella Valley Stormwater Channel in the easterly portion of the planning area, including the eastern half of the Desert Resorts Airport.

In addition to the flooding that could occur in the areas described above, FEMA has identified the potential for a major breakout of the Whitewater River during a 100-year storm at its bend between Miles Avenue and Jefferson Street. If such an event were to occur, portions of the cities of Indio and Coachella, as well as the Indian Springs Country Club, would likely be inundated. Levee improvements completed by CVWD along the stormwater channel have decreased the chance of a breakout occurring.

All-Weather Crossings

As described above, the planning area includes numerous channels and drainage facilities. Six bridge crossings are located in the City at the following locations¹⁷:

- 1) Washington Street at the Whitewater River;
- 2) Washington Street at the La Quinta Evacuation Channel;
- 3) Eisenhower Drive at the La Quinta Evacuation Channel;
- 4) Jefferson Street at the Coachella Valley Irrigation Canal;
- 5) Avenue 50 at the Coachella Valley Irrigation Canal; and
- 6) Avenue 52 at the Coachella Valley Irrigation Canal.

The City Engineering Department is currently evaluating the feasibility of constructing a new bridge at Jefferson Street and the Coachella Valley Stormwater Channel.¹⁸ The bridge at Washington Street and the La Quinta Evacuation Channel was widened in 2000 and plans are being developed to widen the bridge on Eisenhower Drive at the Evacuation Channel.

Bridge Scour

Bridge scour is the erosion and transport of streambed materials from bridge foundations, which is caused by the rapid flow of flood or other surface waters beneath a bridge or railroad crossing. This process can result in the subsequent loss of support of bridge foundations, and the damage or ultimate collapse of the bridge. Scour can occur within the main channel, on the floodplain, or both.

¹⁷ Ibid.

¹⁸ Ibid.

Scouring of roadway and railroad bridges in the planning area could result from local or regional flooding, and should be investigated during and after flooding events.

The State of California participates in a national bridge scour inventory and evaluation program. However, no records have been identified which indicate that the bridges in the La Quinta area have been evaluated. The City should investigate the possibility of participating in this program. Seismic retrofitting of bridges and other crossings, which includes underpinning foundations, can also reduce some of the potential effects of bridge scour.

National Pollutant Discharge Elimination System

Stormwater runoff from developed lands has the potential to contaminate or otherwise pollute surface and ground waters. Runoff from streets, parking lots, building roofs, fertilized golf courses and other landscaped and hardscaped surfaces can also contribute to runoff contamination if not properly managed.

The City participates in the National Pollutant Discharge Elimination System (NPDES), which implements the federal Clean Water Act adopted in 1990. The program requires the adoption and implementation of stormwater management plans and programs that reduce the discharge of pollutants from storm water systems into waters of the United States.

2. Project Impacts

The City is vulnerable to flooding associated with the Whitewater River, Bear Creek Channel system, and smaller scale alluvial fans that descend from the City's steep hillsides. Continued development in the planning area will increase the amount of impervious surfaces, such as sidewalks, parking lots and paved roads, and will contribute to an associated increase in the amount of runoff generated. Future development also has the potential to alter existing drainage patterns and, in some areas, to result in the accumulation of a significant amount of debris during large storms. Large scale developments may utilize golf course, greenbelts and other open space areas as part of a network of channels which collect and convey on-site runoff. However, given the low permeabilities of the bedrock underlying the surrounding mountains, heavy runoff during a major flood event may not be preventable. The City will continue to review and evaluate detailed hydrology analyses on a project-by-project basis. The findings of these studies will be incorporated into project master drainage plans, where appropriate, and the City will have the opportunity to require additional on-site flood control facilities as necessary.

Land use planning is one of the most effective methods of controlling flood damage and protecting lives and property in flood-prone areas. The adoption and implementation of the proposed General Plan will facilitate the regulated development of various land uses and roadways, and the implementation of policies, programs and mitigation measures which directly address the flood hazards facing the City. These include coordinating with FEMA to reduce the boundaries of the designated 100-year floodplain. The Plan seeks to protect life and property by designating flood evacuation routes and preventing new critical facilities from being constructed within the boundaries of the 100-year floodplain. The Plan also calls for the City to take a proactive approach in evaluating and improving the structural integrity of levees, bridges and water storage tanks.

Although the proposed Plan designates major drainages as floodways and protects them from development, it also encourages the enhancement of these facilities for wildlife habitat and community open space. The Plan calls for the City to coordinate with CVWD in developing designs that support multiple uses, including recreational activities such as hiking and equestrian uses, where appropriate.

Overall, the adoption and implementation of the proposed General Plan is not expected to result in significant adverse hydrological impacts. The General Plan Land Use Plan establishes a development intensity that generally minimizes the creation of impermeable surfaces through relatively low densities and the encouragement of integrated Specific Plans, and through the use of on-site retention/detention basins and other development methods which effectively reduce stormwater runoff. Furthermore, the policies and programs established in the proposed Plan are expected to enhance inter-agency planning and cooperation, and facilitate the development of effective and cost-efficient local and regional drainage improvements.

Proposed Annexation No. 12 and Sphere of Influence Amendment

Although the annexation and SOI amendment areas are not expected to be fully developed in the near-term, future development in these areas is expected to contribute to an incremental increase in runoff and flooding potential. As illustrated in Exhibit III-21, the flood hazard potential in the proposed annexation and SOI areas is minimal. Neither the proposed annexation area, nor the SOI amendment area is located within the 100-year floodplain. Only limited portions of these areas, including lands generally north of 54th Avenue and east of Monroe Street, are included within the 500-year floodplain. Neither area contains a major water source, such as a river, drainage channel, or irrigation canal, and neither area is vulnerable to flooding associated with runoff from the Santa Rosa Mountains.

Nonetheless, future development in the annexation and SOI areas will result in the construction of additional impervious surfaces, including roads, sidewalks, driveways, and parking lots. The potential conversion of agricultural land to urban uses will result in a reduction of permeable soils. Future development has the potential to alter or obstruct existing drainage patterns. While large-scale developments, such as Coral Mountain and Kohl Ranch, may utilize golf courses, open spaces and common areas to convey runoff, small-scale projects may require the installation of retention/detention basins and other on-site flood control facilities. The City will need to evaluate hydrological issues on a case-by-case basis and may require project master drainage plans for larger-scale projects. The City will need to work closely with CVWD to monitor development in the annexation and SOI areas and plan for future flood control improvements.

Without mitigation, buildout of the General Plan, Annexation No. 12 and the Sphere of Influence Amendment will result in significant impacts associated with flooding and hydrology.

3. Mitigation Measures

In order to ensure that impacts associated with flooding and hydrology are reduced to a less than significant level, the following mitigation measures shall be implemented:

- A. The City Engineer shall investigate the possibility of participating in the nationwide inventory and evaluation of bridges to address the potential impacts of bridge scour during major flood events.
- B. The City Engineer shall consult and coordinate with the California Division of Safety of Dams to determine if Lake Cahuilla qualifies for structural safety monitoring, and to implement such a monitoring program, as appropriate.
- C. The City shall coordinate with the Coachella Valley Water District to evaluate all above-ground water tanks in the City based on their vulnerability to seismic hazards, and to implement a seismic retrofitting program, where appropriate. Priority shall be given to tanks whose failure might inundate and damage structures down-gradient.
- D. The City shall assure that adequate evacuation routes, as well as ingress and egress access for emergency response vehicles and personnel, are clearly marked and available to residents of the Cove during a major flood event.
- E. All roof and canopy drainage shall be conveyed to the street or off-site in an approved, non-erosive manner. Drainage from development sites shall be conveyed in an approved manner so as to prevent erosion or instability. Water from off-site sources shall not be allowed to discharge onto development sites or should be conducted in a non-erosive manner.
- F. All projects within the City limits shall construct storm drainage and hydrologic improvements to conform to the City's master hydrology and storm drain improvement program, where applicable.
- G. The City shall continue to require the construction of on-site stormwater retention basins to reduce the need for and costs of stormwater conveyance facilities, and to provide enhanced opportunities for groundwater recharge. Development adjacent to the Coachella Valley Stormwater Channel shall continue to have the option of discharging directly into the channel, if approved by the Coachella Valley Water District.
- H. Development proposals encompassing acreage, and those with the potential of generating significant runoff, shall be required to prepare and submit a hydrology study and mitigation plan which implements regional and local requirements, policies and programs.
- I. Future flood control plans required of developers shall include specific recommendations and/or designs regarding pollution control techniques to be applied to keep pollutants, including herbicides, pesticides and other hydrocarbons out of surface water and groundwater. Mitigation measures may include specifically designed open space areas such as artificial wetlands where nuisance and otherwise contaminated on-site runoff shall be retained separate from channels conveying off-site flows.
- J. Hazards resulting from ponding at roadway intersections shall be engineered and improved to maximize drainage capacity of the streets and reduce associated driving hazards.

Mitigation Monitoring/Reporting Program

- A. The City Engineer shall regularly, and at least once each year, report to the City Council on progress made in developing local drainage plans and implementing drainage control projects. The status of regional drainage plans and facilities affecting flood control in the City shall also be reported upon.

Responsible Parties: City Engineer, CVWD, City Council

- B. The City Engineer shall review and approve project-specific hydrology studies and mitigation plans for development proposals, and assure their adequacy with regard to stormwater management and pollution control.

Responsible Parties: City Engineer

F. Water Resources/Quality

1. Existing Conditions

As discussed in Section III-D, Soils and Geology, the Coachella Valley has been formed by tectonic forces that continue to create a deep trough which has been progressively filled with sands and gravel eroded from surrounding hills and mountains. Over millions of years, this sediment-filled basin has functioned as a repository for rainfall, mountain runoff and occasional inundation from the Colorado River. Although the Coachella Valley is one of the driest regions in the United States, its groundwater basin has grown into a large underground repository of fresh water.

Although there has been some inflow of groundwater from subsurface groundwater basins outside the region into the basin underlying the Coachella Valley, the movement of groundwater has been restricted by fault barriers, constrictions in the base profile, and areas of low permeability. The U.S. Geological Survey and California Department of Water Resources have determined that the groundwater basin in the valley is separated into four distinct subbasins, with boundaries that are generally defined by faults that restrict the lateral movement of water.¹⁹ These include the Whitewater River, Mission Creek, Garnet Hill and Desert Hot Springs subbasins, which are further divided into subareas based on geologic and/or hydrologic characteristics.

Whitewater River Subbasin

The Whitewater River Subbasin underlies the majority of the Coachella Valley floor and encompasses approximately 400 square miles. It generally extends from the junction of Interstate 10 and State Highway 111, to the Salton Sea approximately 70 miles to the east. The subbasin is bordered on the north and east by the Garnet Hill and San Andreas Faults, respectively, and on the south by the San Jacinto and Santa Rosa Mountains. Within the first 1,000 feet below the ground surface, the Whitewater River Subbasin contains an estimated 28,800,000 acre-feet of groundwater in storage.²⁰ The subbasin is divided into four subareas, including the Palm Springs, Thermal, Thousand Palms and Oasis subareas.

¹⁹ "Engineer's Report on Water Supply and Replenishment Assessment 2000/2001," prepared by Water Resources Branch, Engineering Department, Coachella Valley Water District, April 2000.

²⁰ Ibid.

The lower Thermal subarea of the Whitewater River Subbasin underlies the General Plan planning area, with the exception of the Santa Rosa and Coral Reef Mountains which are composed of non-waterbearing granitic bedrock. Much of the Thermal subarea is characterized by confined or semi-confined groundwater conditions. However, the alluvial fans at the base of the Santa Rosa Mountains, including the Cove in La Quinta, generally experience unconfined or free water conditions.

The lower Thermal subarea is largely comprised of Ocotillo conglomerate, which consists of silty sands and gravels with interbeds of silt and clay.²¹ Data indicate that the top of the water table is present at a depth ranging from 300 to 600 feet below the surface. The aquifer zone is believed to be at least 500 feet thick, and may be in excess of 1,000 feet thick.²²

The entire Whitewater River Subbasin has historically experienced a steady decline in water levels. CVWD's Management Area, which includes the Palm Springs, Thousand Palms and upper Thermal subareas, is experiencing significant declines in water levels. CVWD monitors numerous wells in the Management Area to determine the extent of consumption and overdraft. The rate of overdraft in the Management Area is currently estimated at about 0.32% per year, which assumes 40% non-consumptive return to groundwater from leaching fields, septic tanks, percolation of water applied to plants and other means.²³

The lower Thermal subarea, which underlies the La Quinta General Plan planning area, is located outside the CVWD Management Area discussed above. However, groundwater levels in this subarea and other areas in the southeastern Coachella Valley have also fluctuated historically. After 1949, when Colorado River water was first imported for irrigation purposes in the eastern Coachella Valley, the demand for groundwater decreased and water levels in the lower Thermal subarea rose sharply.²⁴ However, since the early 1980s, groundwater levels have again declined, in part due to increased urbanization in the eastern Coachella Valley and an associated increase in demand for groundwater resources.

Groundwater Replenishment

The Coachella Valley Water District and Desert Water Agency (DWA) have contracted for State Water Project resources to assure the availability of supplemental groundwater resources to the Coachella Valley. Under this program, water from northern California would be transported to the Valley via the Coachella Aqueduct. However, the construction of the aqueduct has not yet been undertaken. Until the system is developed, CVWD and DWA have entered into an exchange agreement with the Metropolitan Water District (MWD). The arrangement allows CVWD and DWA to exchange their State Water Project entitlements for like amounts of water from MWD's Colorado River Aqueduct, which passes through the northern portion of the Coachella Valley. Water is obtained from a turnout in Whitewater and transported to local spreading facilities, where it recharges the Whitewater River subbasin.

²¹ Ibid.

²² Ibid.

²³ Ibid.

²⁴ Ibid.

From 1973 through 1999, more than 1.5 million acre-feet of Colorado River water contributed to recharge of the Whitewater River subbasin. More than 132,000 acre-feet were transported in 1998 alone.²⁵ However, this amount declined the following year to 61,200 acre-feet. The quantity of Colorado River water diverted to the Coachella Valley fluctuates when inadequate rain or snowfall requires that the water be directed toward the Los Angeles basin. In 1977, the Whitewater River subbasin received no Colorado River water due to severe drought, and in 1991, drought resulted in the delivery of only 14 acre-feet to the area.

Colorado River water is also imported to the southeastern Coachella Valley, however groundwater recharge in this area is minimal. Approximately 300,000 acre-feet of Colorado River water is delivered annually through the Coachella Canal, but it is used solely for irrigation purposes. Since 1996, CVWD has operated a pilot recharge facility south of Lake Cahuilla near Avenue 62 and Madison Street. This site is generally free from aquitards which could slow or prevent the percolation of supplemental water into deep aquifers. Operations at the facility have indicated that recharge at this location is feasible, and plans for a full-scale facility may begin within the next few years.²⁶ Recharge at this location would benefit users in La Quinta, Valerie Jean and other communities in the southeastern Coachella Valley.

Domestic Water Services

Domestic water is provided to the planning area by two water purveyors: Coachella Valley Water District (CVWD) and Myoma Dunes Mutual Water Company. CVWD serves the majority of the planning area, from Washington Street near Interstate 10 in the north, to Avenue 56 in the south. Only limited areas south of Avenue 56 are connected to the CVWD water delivery system. The Myoma Dunes Mutual Water Company provides domestic water to the Bermuda Dunes community, except for lands along Washington Street, which are served by CVWD.

Both service providers utilize wells to extract groundwater from the Whitewater River subbasin. CVWD currently operates eleven active wells, five booster stations and eight reservoirs in the planning area. An additional reservoir is under construction in Lake Cahuilla County Park, and another is being planned near the southern edge of the Cove. Myoma Dunes Mutual Water Company operates six active wells, including one that serves only the Bermuda Dunes Airport, and one water reservoir in the planning area. These facilities are described in more detail in the Domestic Water discussion of Section III-L, Public Services and Facilities.

Tertiary Treated Waste Water

In an effort to reduce the impacts of development on groundwater supplies, CVWD has implemented the use of tertiary (third stage) treated waste water for golf course, landscape and other irrigation purposes. Waste water is typically treated to secondary levels and reintroduced into the groundwater table through percolation ponds. Tertiary treated water undergoes an additional stage of treatment, which makes it suitable for irrigation purposes and decreases, to some extent, the demand for groundwater resources.

²⁵ Ibid.

²⁶ "Seismic, Geologic and Flooding Hazards Sections of the Technical Background Report for the Safety Element for the City of La Quinta," prepared by Earth Consultants International, November 9, 1999.

Although this process is not currently available at the Mid-Valley Reclamation Plant, the wastewater treatment plant located at Madison and 38th Avenue does have the capacity to treat 2.5 million gallons per day (mgd) of tertiary treated water. The tertiary treatment filter system is expected to be expanded to treat 5 mgd within the next two to three years.²⁷

Water Quality

Ground water quality is dependent upon a number of factors, including the source of water, the type of water-bearing materials in which it occurs, hydrologic factors such as groundwater recharge, and the quality of well maintenance. Water quality is generally good to excellent. The water quality in the upper Whitewater River subbasin has been affected somewhat by the importation of Colorado River water, which is about three times higher in total dissolved solids than natural upper Whitewater River groundwater. The following table indicates the relative quality of surface waters recharging the subbasin, including those imported from the Colorado River and other sources of natural recharge.

Table III-15
Mineral Analysis of Representative Surface Waters

Source	Whitewater River (North)	Snow Creek	Colorado River	Whitewater River (South)
Constituent	epm ¹ /ppm ²	epm/ppm	epm/ppm	epm/ppm
Ca	1.75/35	0.50/10	3.97/79	9.08/181
Mg	0.90/11	0/0	2.31/28	3.74/45
Na	0.62/14	0.47/11	4.78/110	32.58/749
K	0.108/4.2	0.04/1.6	0.11/4.3	0.39/15
Cl	0.1/4	0/0	6.01/213	15.96/566
Total Dissolved Solids	201 ppm	55 ppm	727 ppm	2,983 ppm

Notes: ¹ epm = chemical equivalents per million; ² ppm = parts per million by weight

Source: DWR Bulletin No. 108: Coachella Valley Investigation. California Dept. of Water Resources, July 1964.

Impacts of Septic Systems on Groundwater Quality

Another more recent, but less extensive impact on area groundwater is contamination associated with long-term discharge from on-lot septic systems. The Regional Water Quality Control Board, Riverside County Health Department and Coachella Valley Water District have acknowledged that septic tanks have the potential to adversely impact groundwater which supplies the Coachella Valley with its drinking water. The impact of septic systems on groundwater quality depends on a number of factors, including relative density, population, wastewater volume, soil conditions and the level of maintenance of the septic system. The greatest impact on groundwater quality is expected to occur where septic systems serve large populations in high densities and are poorly maintained. Community sewer systems generally provide excellent protection of groundwater resources, as the threat of nitrate pollution in the groundwater is reduced through the removal of sewage materials.

²⁷ Bruce Clark, Principal Sanitation Engineer, Coachella Valley Water District, May 10, 2000.

While much of the La Quinta General Plan planning area is sewerred, many homes and businesses continue to operate on individual septic systems. In particular, scattered development in Bermuda Dunes, as well as most development south of Airport Boulevard relies on private septic systems to treat and dispose of wastewater. Many of these systems will be abandoned over time, as future development occurs and infrastructure is expanded.

Water Quality Regulation

A number of federal and state laws have been established to assure adequate planning, implementation, management and enforcement of water quality control efforts. Federal water quality legislation includes the Clean Water Act and the National Environmental Policy Act (NEPA). California statutes and administrative laws that are applicable to water quality include, but are not limited to the California Water Code, California Environmental Quality Act (CEQA), California Code of Regulations and other codes such as the Health and Safety Code, Fish and Game Code and Public Resources Code.

The California Regional Water Quality Control Board (WCQB) implements federal and state laws pertaining to water quality. The primary issues addressed by the WQCB in the Coachella Valley are agricultural drainage, geothermal power impacts, the New River, Salton Sea, Tahquitz Creek and other sources of surface water. Other locations monitored by the WQCB include sites where inappropriate disposal of hazardous and toxic materials have threatened to contaminate groundwater. These include leaking fuel storage tanks, illegal discharges or human or animal waste, and the dumping of waste oils and other hazardous liquids.

National Pollutant Discharge Elimination System (NPDES)

The NPDES implements the federal Clean Water Act and was adopted in 1990. Under the NPDES, plans and programs for stormwater management must be developed, adopted and implemented to assure that municipalities "effectively prohibit non-storm water discharge into the storm drain and require controls to reduce the discharge of pollutants from storm water systems to waters of the United States to the Maximum Extent Possible." The legislation also makes the implementation of pollutant control measures exempt from CEQA.

2. Project Impacts

Buildout of the proposed General Plan is expected to result in the development of approximately 78,952 dwelling units. This represents an increase of about 41,923 dwelling units, or about 113%, over the current General Plan. The proposed Plan also facilitates a 23% increase in the amount of commercial development, and a 43% increase in the amount of industrial development, as compared to the current General Plan. Therefore, the impacts of the proposed Plan on water resources are expected to be greater than those associated with buildout of the current General Plan, and are expected to contribute to the cumulative impacts of urban development on groundwater resources in the Coachella Valley.

Nonetheless, the proposed Plan also establishes new policies and programs which further encourage water efficiencies, including the continued use of native and non-native drought tolerant landscaping, and water-efficient plumbing features in new development. The City is also directed to coordinate with local water purveyors to expand groundwater recharge efforts.

Future Consumptive Demand

A number of water consumption rates have been published and can be used to estimate future water demand associated with buildout of the proposed Plan. It is important to note that consumption of usage rates are offered only as guides, and each estimate should be evaluated for its appropriateness to specific projects.

The Environmental Impact Analysis Handbook estimates that water consumption for private residential dwelling units is approximately 50 to 75 gallons per person per day.²⁸ While this figure may provide a reasonable estimate of future water demand generated by residential lands in the planning area, it does not account for water consumed by commercial, industrial, recreation or other uses.

The Coachella Valley Water District estimates that domestic water demand in its urban service area is approximately 550 gallons per day (gpd) per capita. This is an aggregate figure that accounts for all water uses in the community, including residential, commercial, industrial, golf course, irrigation and other uses, and is not intended to represent a specific land use such as residential uses. This factor is used in the following analysis because it best reflects local water consumption conditions.

The California Department of Finance estimates that the average household size in the City of La Quinta is 3.263 persons per household²⁹. This figure most likely overestimates the City's actual average household size. It is derived by dividing the City population by the number of occupied housing units, but it does not account for 38.83 % of the total housing units which are occupied on a seasonal basis. A straightline comparison of the City's population (24,240 residents) and its total number of dwelling units (12,141 units) yields an average household size of only 1.99 persons per household in the City of La Quinta. The average household size in the Thermal portion of the planning area is generally larger than that in the City of La Quinta, and is estimated to be approximately 2.75 persons per household³⁰. Therefore, to provide a conservative buildout population estimate for the entire planning area, an average household size of 2.75 is used in the following analysis.

Buildout of the proposed General Plan is expected to result in the development of approximately 66,811 new dwelling units. At the rate of 2.75 persons per household, General Plan buildout could generate an additional 183,730 residents within the planning area. When combined with the existing City population of 24,240 persons, the City's population at General Plan buildout could potentially reach 207,970 persons. This is a conservative, long-range estimate that assumes all residential lands within the planning area will develop at 75% of the maximum densities permitted.

Based on the CVWD water consumption factor of 550 gpd per capita, General Plan buildout could raise the city-wide total domestic water demand to approximately 114.3 million gallons per day, or about 350 acre-feet per day. This estimate includes water consumed by existing and future

²⁸ Table 6.11, "Environmental Impact Analysis Handbook," edited by John G. Rau and David G. Wooten, McGraw-Hill Book Company, 1980.

²⁹ California Department of Finance, January 2000.

³⁰ Demographic Data, Thermal area, Urban Decision Systems, 1999.

residents. Actual impacts may vary depending on the actual number of persons per household at buildout, and the level and type of landscaping and water-dependent amenities within each project. CVWD estimates that approximately 40% of domestic water consumed is reintroduced into the groundwater table through percolation, and is not lost. This includes a percentage of irrigation water applied to residential and other landscaping.

Increases in water consumption will occur gradually, as new development takes place. Implementation and buildout of the proposed General Plan will contribute to the cumulative impacts of urban development on groundwater resources in the Coachella Valley, including the continued reduction in the amount of potable groundwater in storage.

Impacts to water quality are expected to be comparable to, or slightly greater than those resulting from buildout of the current General Plan. While the proposed Plan facilitates more development, which could increase the potential for groundwater contamination, its policies and programs are directed at minimizing these risks and assuring the continued implementation of federal, state, local and other applicable pollution control standards.

Proposed Annexation No. 12 and Sphere of Influence Amendment

As discussed in Section III-A, buildout of the proposed annexation area could result in the development of approximately 12,225 dwelling units. The annexation area has an average household size of about 2.75 persons per household. At this rate, future development in the annexation area could add an additional 33,619 residents to the area population. Applying the CVWD water consumption factor of 550 gallons per day (gpd) per capita yields a buildout domestic water demand of about 18,489,900 gpd. This includes water demanded by all types of development in the annexation area at buildout, including residential, commercial and industrial development, and water used for irrigation and other landscaping purposes.

Buildout of the proposed sphere of influence amendment area is expected to result in the development of approximately 19,243 dwelling units. At a rate of 2.75 persons per household, the buildout population of the SOI area would be 52,918 residents. Applying CVWD's water consumption factor of 550 gpd, residents in the SOI area would consume an estimated 29,104,900 gpd of domestic water.

Both of these consumption estimates are included as part of the "Future Consumptive Demand" discussion above, which estimates consumptive demand for the entire General Plan planning area, including the proposed annexation and SOI amendment areas. Impacts to domestic water resources are not expected to occur immediately, as no development projects are expected to occur within the annexation or SOI amendment areas in the immediate future. Rather, increases in water consumption will occur gradually, as new development occurs. Nonetheless, buildout of the annexation and SOI areas will contribute to a cumulative increase in the demand for domestic water resources.

Without mitigation, buildout of the General Plan, Annexation No. 12 and the Sphere of Influence Amendment will result in significant impacts associated with water resources.

3. Mitigation Measures

Water Conservation

Water conservation is essential as both a short-term and long-term resource management strategy. With increasing demands on water supplies in the Coachella Valley, efforts to reduce per capita water consumption have become increasingly important. One of the best opportunities for water conservation is the implementation of water efficient landscaping design and management. The City has adopted a water conserving landscape ordinance as required by state law, which requires that new landscape plans be designed to incorporate more native and locally compatible drought-tolerant planting materials and efficient irrigation systems. General Plan policies and programs promote water conservation through the continued implementation and updating of the City's Water Conservation Ordinance. The General Plan also directs the City to support public education programs which encourage water conservation.

The lower Thermal subarea, from which the City's groundwater is drawn, does not currently receive substantial direct artificial recharge from Colorado River water. However, this process has been determined to be feasible at a pilot recharge facility south of Lake Cahuilla. The General Plan directs the City to continue to require on-site retention basins to further enhance groundwater recharge, and to support CVWD's efforts to expand its recharge facilities. The Plan also requires the City to encourage and support the use of tertiary treated water as a means of reducing the demand for groundwater resources. The wastewater treatment plant at Avenue 38 and Madison currently provides tertiary treated water, and this capacity is expected to be expanded in the next few years.

The proposed General Plan also directs the City to assure that the quality of water resources is protected. One of the primary methods of complying with the provisions of NPDES is the use of project-specific stormwater retention or detention basins within new developments. These structures are important in intercepting sand and sediment before it is discharged into drainage facilities. The City will also have the capacity to review and evaluate development projects for their potential to contaminate surface and groundwaters, and to require the implementation of appropriate mitigation measures. To further protect water quality, the City will encourage the connection of existing and future development to the sewage treatment system operated by the Coachella Valley Water District, which will reduce the threat of contamination from septic tanks and seepage pits.

General Mitigation Measures

In order to ensure that impacts associated with water resources are reduced to a less than significant level, the following mitigation measures shall be implemented:

- A. The City shall promote and encourage the protection and wise utilization of the Valley's domestic water supplies to assure the long-term viability and availability of clean and healthful water resources.
- B. The City shall continue to require the development of on-site stormwater retention and/or detention basins, where appropriate, to enhance filtration of runoff and the replenishment of groundwater subbasins.

- C. All future development projects shall be carefully analyzed by the City, Coachella Valley Water District and/or Myoma Dunes Mutual Water Company to determine the potential impacts of such activities on local groundwater resources.
- D. The City shall support and cooperate with the Coachella Valley Water District in the development of a permanent groundwater recharge facility within the planning area.
- E. The City shall continue to implement its Water Conservation Ordinance to encourage the use of drought tolerant landscaping in public and private development as a means of reducing water consumption. All development plans shall adhere to the City's ordinance.
- F. The City shall require the installation of low-flush toilets, and low-flow showerheads and faucets in all new construction, in conformance with Section 17921.3 of the Health and Safety Code, Title 20, California Administrative Code Section 1601(b), and applicable sections of Title 24 of the State Code.
- G. The City shall support and cooperate with CVWD's efforts to expand tertiary waste water treatment capacities and to encourage the use of tertiary treated water in the planning area.
- H. The Coachella Valley Water District shall maintain adequate wastewater treatment plant facilities to assure that discharges of effluent are sufficiently treated to meet the standards of the California Regional Water Quality Control Board. Myoma Dunes Mutual Water Company shall also ensure that adequate treatment capacities are available to treat wastewater generated within its service boundaries.
- I. The City shall encourage and/or require that existing and new development connect to the existing sewage system, to the greatest extent practical, to minimize the potential risks of groundwater contamination associated with the use of septic tanks and seepage pits.

Mitigation Monitoring/Reporting Program

- A. All development proposals shall be reviewed by the Community Development Department to assess the potential for adverse effects on water quality and quantity. All development proposals shall be required to mitigate any significant impacts.
Responsible Parties: Community Development Department, City Engineer, developers, Coachella Valley Water District, Myoma Dunes Mutual Water Company
- B. The Coachella Valley Water District and Myoma Dunes Mutual Water Company shall coordinate and cooperate with local, state and federal agencies to assure the protection of groundwater aquifer from excessive extraction.
Responsible Parties: Coachella Valley Water District, Myoma Dunes Mutual Water Company

G. Biological Resources

1. Existing Conditions

The following discussion is largely based upon the biological resource assessment prepared for the La Quinta General Plan Update.³¹, which is included in Appendix C of this document. Other sources of information include the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), Bureau of Land Management (BLM), and The Coachella Valley Mountains Conservancy. In addition to a comprehensive literature review of biological studies prepared for development projects in the planning area, the consultant also reviewed the Coachella Valley fringe-toed lizard Habitat Conservation Plan, the California Natural Diversity Data Base, and botanical and wildlife references. Field visits to the planning area were performed in July and September 1999.

Regional Biological Setting

The Coachella Valley is located at the western edge of the Colorado Desert subdivision of the Sonoran Desert, and is characterized by an arid, hot climate with low humidity, mild winters and occasional summer thunderstorms. The region is effectively isolated from coastal influences by the San Jacinto, San Bernardino and Santa Rosa Mountains, which surround the valley on the west, northwest and south, respectively. The Valley's unique geographic and geophysical composition has created an environment which supports diverse and occasionally highly specialized communities of plants and animals. The desert floor supports sparse vegetation, which is limited by heat and aridity, while the cooler mountain slopes are capable of supporting more dense and diverse vegetation.

The La Quinta General Plan planning area lies in the south-central portion of the Coachella Valley. Elevations range from about 190 feet below sea level in the southeastern portion of the planning area, to approximately 1,600 feet above sea level at the peak of the Coral Reef Mountains. Terrain within the planning area also varies significantly, consisting of rocky slopes of the Santa Rosa and Coral Reef Mountains, alluvial fans and drainages emanating from the mountains, gently sloping windblown sand fields in the north, and low-lying agricultural lands to the east. Each of these habitats supports an array of plant and animal communities which are described in detail below.

Biological resources in the planning area have been significantly influenced by the historical presence of ancient Lake Cahuilla, which evaporated approximately 400 years ago, when the Colorado River changed its course to flow directly into the Gulf of California. Although the shoreline of ancient Lake Cahuilla fluctuated over 6,000 years from sea level to about 36 feet in elevation, lands generally north of Avenue 50 are considered to have been above the shoreline. Plant communities diverge substantially at this broad shoreline zone, reflecting the variation in soils above and below the shoreline.

³¹ "City of La Quinta General Plan Biological Assessment," prepared by Dr. Lawrence LaPre, June, 2001.

Natural Plant Communities

Six natural communities, which are generally associated with a specific soil type, are represented in the planning area. The characteristics of each community are described below.

Stabilized Shielded Desert Sand Fields

Stabilized Desert Sand Fields occur in the northern portion of the planning area, generally north of Avenue 50. This habitat consists of shifting, windblown sand that lacks dune formation and is stabilized by vegetation. It is highly dependent upon the natural migration of blowing sand, also referred to as aeolian activity, which is facilitated by strong winds in the northern planning area and elsewhere in the Coachella Valley. The blowsand process has been disturbed in recent years by urbanization, particularly the shielding effects of windbreaks, such as buildings, fences, landscaping, roads and other paved surfaces in upwind areas to the west. None of the sand fields in the planning area are of such a high quality that they have been targeted for conservation.

Sand Fields provide critical habitat for a number of sensitive plant and animal species, including the Coachella Valley Fringe-Toed Lizard, flat-tailed horned lizard, giant sand-treader cricket, Coachella Valley Jerusalem cricket, burrowing owl and Palm Springs round-tailed ground squirrel. Additionally, these lands are presumed to provide declining habitat for the endangered Coachella Valley milkvetch, although the the eastern and southern range limits of this species are not well defined.

Mesquite Hummocks

Mesquite hummocks consist of large clumps of honey mesquite shrubs occurring over sand dunes on relatively level terrain. They are associated with high soil moisture or springs, and provide valuable wildlife habitat for declining species which have suffered from habitat fragmentation. Mesquite hummocks are particularly attractive to a number of bird species, including verdin, phainopepla and black-tailed gnatcatcher, as well as sensitive species such as the LeConte's thrasher and Crissal thrasher. In the southern portion of the planning area, which is underlain by alkaline soils, saltbush and alkali goldenbush occupy the spaces between the mesquite.

Nearly all mesquite hummocks in the planning area have been isolated and fragmented, and many have been degraded by vehicle activity and/or illegal dumping. More disturbed parcels have been invaded by tamarisk. Therefore, none of the mesquite hummocks in the planning area are considered viable long-term conservation areas.

Sonoran Creosote Bush Scrub

The predominant habitat type in the Coachella Valley is Sonoran Creosote Bush Scrub, which occurs mainly above the shoreline of ancient Lake Cahuilla in the La Quinta planning area. This community contains a high proportion of annual wildflowers and is dominated by creosote bush, burrobrush, brittlebush and other common desert perennials. Due to limited food, water and nesting resources in Sonoran Creosote Bush Scrub habitat, the diversity of species which are supported by this natural community is rather low. Common mammals include the little pocket mouse, black-tailed jack rabbit, kit fox and coyote.

Sonoran Mixed Woody and Succulent Scrub

This widespread plant community is similar to the Sonoran Creosote Bush Scrub, but generally denser and more varied. In the planning area, it occurs on rocky, well drained slopes and alluvial fans at the base of the Santa Rosa Mountains. The habitat value for Sonoran Mixed Woody and Succulent Scrub is generally low, as it provides limited water and other biological resources. Dominant species include brittlebush, creosote bush, indigobush, catclaw acacia, and several species of cacti. Sensitive plant species include California ditaxis and glandular ditaxis.

Desert Dry Wash Woodland

The Desert Dry Wash Woodland is considered a “community of the highest inventory priority” by the California Department of Fish and Game, and is therefore considered to be a sensitive, though not legally protected, environmental habitat. This community occurs as an open to dense riparian woodland which provides low to moderate habitat for watershed wildlife and often supports a high diversity of wildlife species. Characteristic species include smoke tree, palo verde and cheesebush. In the planning area, desert dry washes occur on alluvial fans below canyons of the Santa Rosa Mountains. Good examples of intact smoke tree washes are found south of the Cove and east of Bear Creek, near the Travertine development.

Tamarisk Scrub

Tamarisk scrub represents any of several *Tamarix* species, which usually supplant native vegetation following major ground surface disturbances. This community is actually misnamed as a “natural” community, since it is not composed of indigenous plant species. Within the planning area, it is prevalent near the Desert Resorts Airport.

Rocky Slopes Habitat

Rocky slopes habitat occurs on the weathered and fractured bedrock of slopes and ravines, some of which has been broken and displaced and occurs as loose debris of stone, pebbles and sand. In the planning area, the rocky slopes of the Santa Rosa and Coral Reef Mountains offer suitable habitat for a wide variety of shrubs, common perennials, annuals and succulents. Plant species and sizes generally become more diverse as elevation increases. Perennials commonly found on rocky slopes include creosote bush, brittlebush, burrobrush, agave, ocotillo, spike moss, rushpea, and pigmy cedar. Connectivity with vast areas of wildlands in the Santa Rosa Mountains allows for the presence of wide-ranging animals, including the Peninsular bighorn sheep, bobcat and mountain lion, as well as such predators as the golden eagle and prairie falcon.

Other Habitats in the Planning Area

Wildlife habitats in the General Plan planning area also include urban lands, golf courses, and agricultural lands. Golf courses provide food, shelter, and water for species that can adapt to the modified landscape, particularly birds. Certain species of bats, notably the yellow bat, may be attracted to palm trees near water sources, although this use is not well documented. Golf courses may also attract undesirable species, however, including starlings, house sparrows, and pigeons, which can displace native wildlife and compete for food in adjoining desert habitats. Water traps may be capable of supporting *Culicoides* gnats, which can harbor diseases of bighorn sheep.

Although they typically result in disturbance of the ground surface, agricultural lands can attract a number of species not usually found in desert scrub habitats. Burrowing owls are known to nest along agricultural ditches and forage on agricultural fields, where insects are abundant. Water birds associated with the Salton Sea, including ibises, egrets, gulls, curlews, forage on agricultural lands and adjoining canals.

Desert washes constitute a distinct habitat and are often used as travel corridors by wildlife utilizing habitat in the mountains and valley floor. Vegetation typically includes palo verdes, smoke trees, and shrubs adapted to infrequent flooding. Bird species are abundant and may include verdin, phainopepla, and black-tailed gnatcatcher. This habitat is also productive for several species of snakes, lizards, and nocturnal rodents. Urbanization and flood control improvements have resulted in a significant decline in the number of undisturbed desert wash habitats in the Coachella Valley.

Sensitive Species

The La Quinta General Plan planning area is host to a wide variety of sensitive plant and animal species, some of which have been listed as threatened or endangered by federal and state governments. The U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) maintain lists of these species and provide information on where they are known to be present or where they could potentially occur. In addition, the California Native Plant Society (CNPS), a non-profit conservation organization, maintains a listing of native flora which it believes to be rare and/or endangered.

“Endangered” species are those with such limited numbers, or those that are subject to such extreme circumstances that extinction is a real possibility. “Threatened” species are those whose numbers have declined to such low levels, and/or whose populations are so isolated that the continuation of the species could be jeopardized in the near future. “Rare” and “sensitive” species are those that are particularly sensitive to the impacts of urban development, are naturally rare, or whose habitat is declining, but where perpetuation does not appear to be significantly threatened.

The following table identifies sensitive species known to occur or likely to occur in the planning area. A more comprehensive listing is provided in the Biological Assessment in Appendix C of this document.

Table III-16
La Quinta Species of Special Concern

Animal and Plant Species	Scientific Name	Status
Plants		
Coachella Valley milk-vetch	<i>Astragalus lentiginosus var coachella</i>	FE/ND
California ditaxis	<i>Ditaxis californica</i>	FSC/ND
Flat-seeded spurge	<i>Chamaecyce platysperma</i>	FSC/ND
Glandular ditaxis	<i>Ditaxis clariana</i>	ND/ND
Slender woolly heads	<i>Nemacaulis denudata</i>	ND/ND
Invertebrates		
Coachella giant sand treader cricket	<i>Mecrobaenetes valgum</i>	FSC/ND
Coachella Valley Jerusalem cricket	<i>Stepopelmatus cahuilaensis</i>	FSC/ND
Coachella Valley grasshopper	<i>Spaniacris deserticola</i>	ND/ND
Casey's June beetle	<i>Dinacoma caseyi</i>	ND/ND
Dark aurora blue	<i>Euphilotes enoptes cryporufes</i>	ND/ND
Coachella desertsnailed	<i>Cahuillus indioensis</i>	ND/ND
Moth lacewing (Cheeseweed owlfly)	<i>Oliarces clara</i>	FSC/ND
Reptiles		
Coachella Valley fringe-toed lizard	<i>Uma inornata</i>	FT/SE
Flat-tailed horned lizard	<i>Phrynosoma mc'calli</i>	FSC/ND
Desert tortoise	<i>Gopherus agassizi</i>	FT/ST
Chuckwalla	<i>Sauromalus obesus</i>	FSC/ND
Birds		
Burrowing Owl	<i>Athene cunicularia</i>	ND/CSC
Crissal Thrasher	<i>Toxostoma dorsale</i>	ND/CSC
LeConte's Thrasher	<i>Toxostoma lecontei</i>	ND/CSC
Loggerhead Shrike	<i>Lanius budovicianus</i>	FSC/ND
Golden eagle	<i>Aquila chrysaetos</i>	ND/CSC
Prairie falcon	<i>Falco mexicanus</i>	ND/CSC
Mammals		
Peninsular bighorn sheep	<i>Ovis canadensis cremnobates</i>	FE/ND
Palm Springs little pocket mouse	<i>Perognathus longimembris bangsi</i>	FSC/ND
Palm Spr. round-tailed ground squirrel	<i>Spermophilus tereticaudus chlorus</i>	FSC/ND
Southern yellow bat	<i>Lasiurus ega</i>	ND/ND

Status Definitions:

FE = Federally listed as "Endangered"

FT = Federally listed as "Threatened"

FPE = Federally proposed/petitioned as "Endangered"

FSC = Federal Species of Concern

SE = State listed as "Endangered"

ST = State listed as "Threatened"

CSC = State species of Concern

ND = Not designated

Peninsular Bighorn Sheep

The Peninsular bighorn sheep is a large mammal which occurs on the open, rocky hillsides of the Santa Rosa Mountains and was designated as an endangered species by the U.S. Fish and Wildlife Service in 1998. The bighorn population has decreased dramatically over the past thirty years, from an estimated 1,171 individuals in 1971, to between 400 and 600 in 1991.³² A number of factors have contributed to the rapid decline in the number of bighorn, including the effects of disease, high rates of predation and low recruitment of lambs. Direct and indirect impacts associated with urban development, particularly habitat loss, degradation and fragmentation, have also adversely impacted the bighorn population. Recent studies have shown that the sheep have become accustomed to obtaining food and water from local country clubs, golf courses, residential and commercial properties, and other lands with lush landscaping.

Although few recent sightings have been reported in La Quinta, signs of bighorn activity have been identified in the Santa Rosa Mountains adjacent to the Cove.³³ The USFWS considers historical bighorn habitat to include all of the slopes and part of the valley floor, out to a distance of about 800 meters.³⁴ The mountains provide viable bighorn habitat and should be considered as reserve quality for biological resources.

The USFWS recently published a Recovery Plan and designated Critical Habitat for the bighorn. The Critical Habitat designation includes all hillsides within the City and much of the bordering flatlands and alluvial fans, as illustrated in Exhibit III-22. Projects receiving federal funding will be required to initiate consultation with the USFWS to determine if the proposed activities will adversely modify Critical Habitat.

Desert Tortoise

The Desert tortoise is listed as a “threatened” species by both the U.S. Fish and Wildlife Service and the California Department of Fish and Game. Occupied habitats include desert washes, canyon bottoms and rocky hillsides, but tortoises are known to occupy a wide range of habitats. Threats to desert tortoise include predation from coyotes, bobcats, ravens, golden eagles and possibly other mammals and birds. Tortoise habitat has also been lost or degraded as a result of urbanization and associated human activities, including off-highway vehicle use and the construction of roadways and utility corridors.

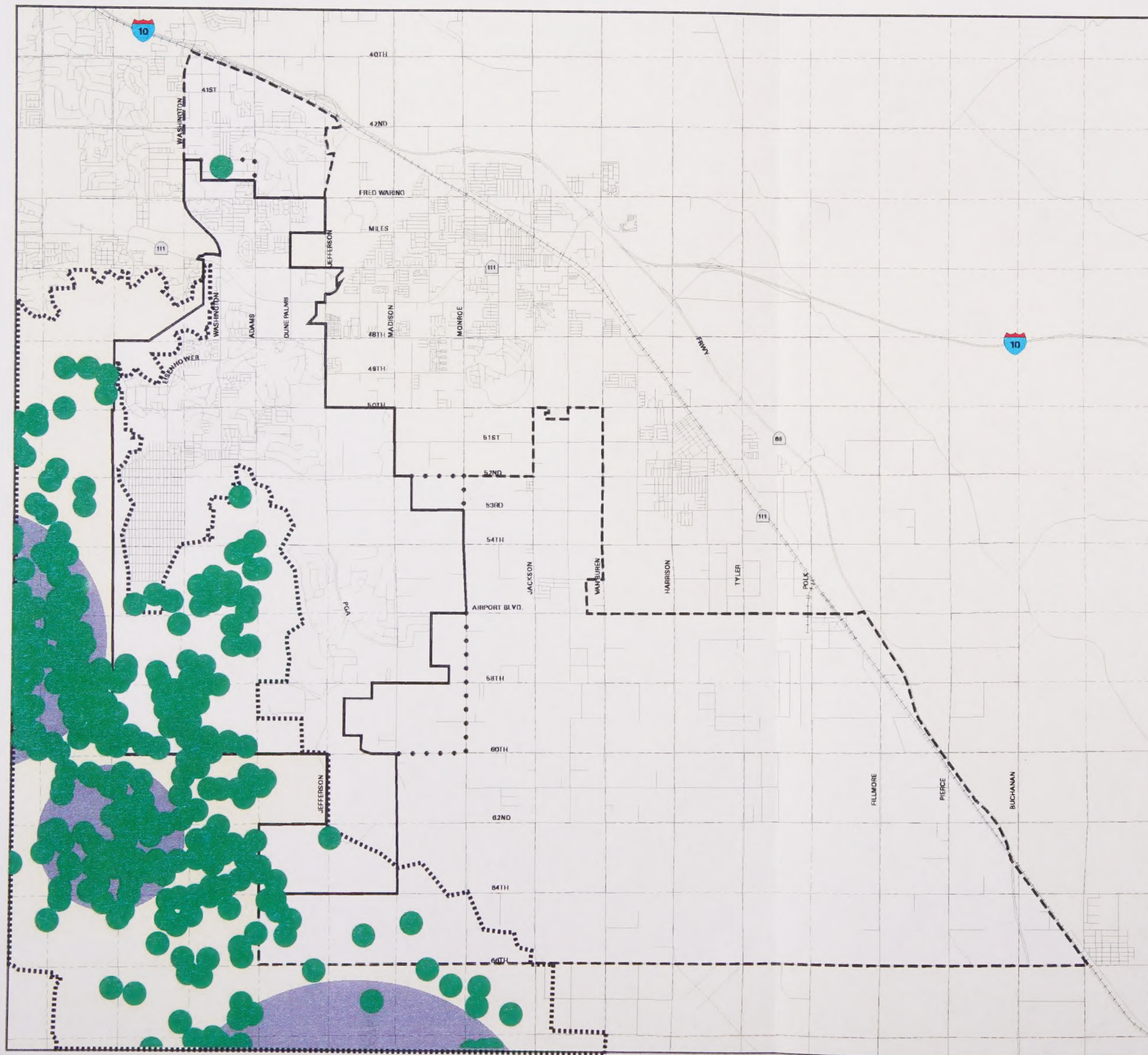
The USFWS and BLM have indicated densities of between 0 and 20 tortoises per square mile in the La Quinta area, and signs of tortoise activity have been found on the Bear Creek alluvial fan.³⁵ It is likely that tortoises remain at low densities in undeveloped areas at the base of the Santa Rosa Mountains, as illustrated in Exhibit III-23. Prior to urban development, these areas should be surveyed for the presence of desert tortoise.

³² p. 13136, Federal Register, Vol. 63, No. 52, March 18, 1998.

³³ “City of La Quinta General Plan Biological Assessment,” prepared by Dr. Lawrence LaPre, April, 2001.

³⁴ Ibid.

³⁵ Ibid.



City of La Quinta General Plan

LEGEND

Roads

Township/Range Sections

Railroads

City Limits

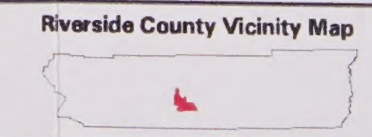
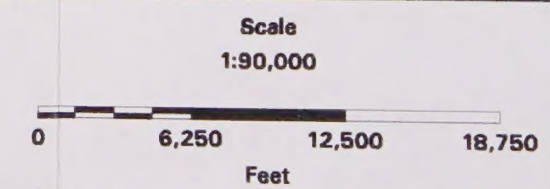
General Plan Planning Area

City Sphere of Influence

Exhibit III-22 Peninsular Big Horn Sheep

-  Peninsular Bighorn Sheep Critical Habitat
-  Approximate Peninsular Bighorn Sheep Localities
-  Peninsular Bighorn Sheep Observations

Source: Lawrence F. LaPre, Ph.D., June, 2001



Map Prepared on: July 10, 2000
Map Prepared by: Aerial Information Systems
Map Version No.: 5





Coachella Valley Milkvetch

The Coachella Valley milk-vetch is a federally endangered, short-lived perennial found only in the Coachella Valley. It occurs in dunes and sandy flats and along the disturbed margins of sandy washes, and may occur in localized pockets where sand has been deposited by wind or by active washes. The species tends to occur in coarse sands at the margins of dunes, rather than in the most active blowsand areas, and appears to be dependent upon sand dune ecosystems. The primary threat to the Coachella Valley milk-vetch is habitat destruction due to continuing urban development. Other impacts may also result from off-road vehicle use, foot traffic and the intrusion of non-native plants.

The primary known range of the Coachella Valley milk-vetch is between Cabazon and the western boundary of the City of Indio, where it has been documented in twenty locations. The closest reported location to the planning area is on the Coachella Valley Preserve, approximately one mile north of the northern study area boundary. Although remaining blowsand habitat in the planning area appears suitable to support this plant, the majority of the planning area is probably located outside the range of this species.

California Ditaxis

California ditaxis is a federal species of concern and is designated as List 1B (rare and endangered in California and throughout its range) by the California Native Plant Society. It is an annual or short-lived perennial which occurs in dry washes, flood plains and rocky alluvial slopes of canyons. Little is known about its natural history and ecology, and information about its population distribution and density is limited. However, threats to the species are known to include cumulative habitat loss, flood control improvements, and degradation of habitat from off-road vehicle use. Although the California ditaxis is scarce, the plant has been regularly observed in La Quinta area washes on alluvial fans, rocky slopes in the vicinity of Bear Creek Canyon, and around the margins of the La Quinta Cove.³⁶ All existing known populations, which consist of only a few plants each, should be considered significant. Surveys for this species should be conducted where development is proposed on ungraded lands south of the Cove and west of the levee on the alluvial fans and lower slopes of the Santa Rosa Mountains. Survey areas for the California ditaxis are best defined as the recommended survey areas for the desert tortoise, illustrated on Exhibit III-23.

Glandular Ditaxis

The glandular ditaxis is designated as a List 2 species by the California Native Plant Society, which indicates that it is considered rare, threatened or endangered in California, but more common elsewhere. It occurs on rocky hillsides and canyon mouths. Although it has not been recorded in Bear Creek, glandular ditaxis may occur on undeveloped, ungraded lands at the base of the Santa Rosa Mountains. Recommended survey areas for glandular ditaxis are the same as those recommended for the desert tortoise, illustrated on Exhibit III-23.

³⁶ "Biological Analysis of Three Conservation Alternatives for the Coachella Valley Multi-Species Habitat Conservation Plan/NCCP," prepared by the Coachella Valley Mountains Conservancy, 2000.

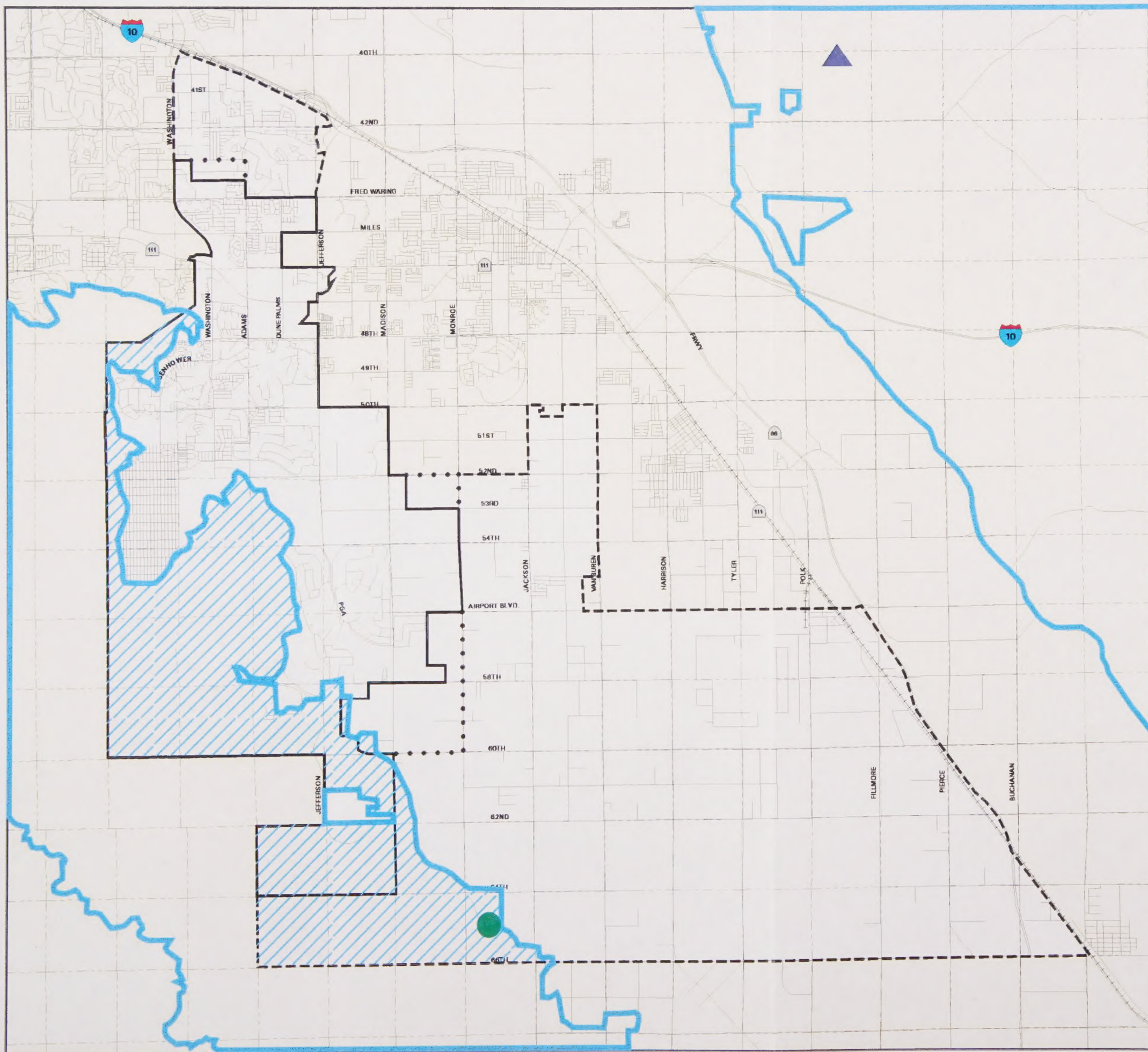
Coachella Giant Sand-Treader Cricket

The Coachella Giant Sand-Treader Cricket is designated as a federal Species of Concern, but is not designated under the state Endangered Species Act. This insect is well adapted for sand dune habitat. The closest known location of the Coachella Valley giant sand-treader cricket to the planning area is Bermuda Dunes, although this location may no longer be extant. The planning area occurs within the range of this species, and the likelihood of its occurrence in undisturbed windblown sand is high. Areas with a high likelihood of occurrence are illustrated in Exhibit III-24. Prior to development in these areas, surveys should be conducted to determine the presence of the species.

Flat-Tailed Horned Lizard

The Flat-Tailed Horned Lizard inhabits sand dunes, sheets, hummocks, and gravelly washes. The Coachella Valley is at the northern end of its range. Based on a past abundance of sitings at certain locations, but few recent records of this species, the flat-tailed horned lizard is believed to have declined substantially. The lizard was proposed as a federally threatened species in 1993. However, based on unreliable data on threats to the species and proposed management strategies, the proposal to designate the species as "threatened" was withdrawn by the U.S. Fish and Wildlife Service. It is now designated as a federal Species of Concern, but is not designated under the State Endangered Species Act.

The flat-tailed horned lizard has been observed in the Coachella Valley Preserve, but focused surveys in apparently suitable habitat have failed to record its occurrence. Nonetheless, undisturbed sand dunes, sheets, and hummocks, as illustrated in Exhibit III-25, should be considered potentially suitable habitat. Prior to development, these areas should be surveyed for the presence of the flat-tailed horned lizard.



City of La Quinta General Plan

LEGEND

-  Roads
-  Township/Range Sections
-  Railroads
-  City Limits
-  General Plan Planning Area
-  City Sphere of Influence

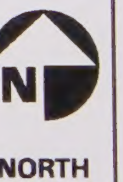
Exhibit III-23 Desert Tortoise

-  Desert Tortoise Potential Distribution
-  Recommended Survey Area
-  Desert Tortoise Known Locations
-  Desert Tortoise Sign Locations

Source: Lawrence F. LaPre, Ph.D., June, 2001

Scale
1:90,000

0 6,250 12,500 18,750
Feet



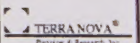
Riverside County Vicinity Map

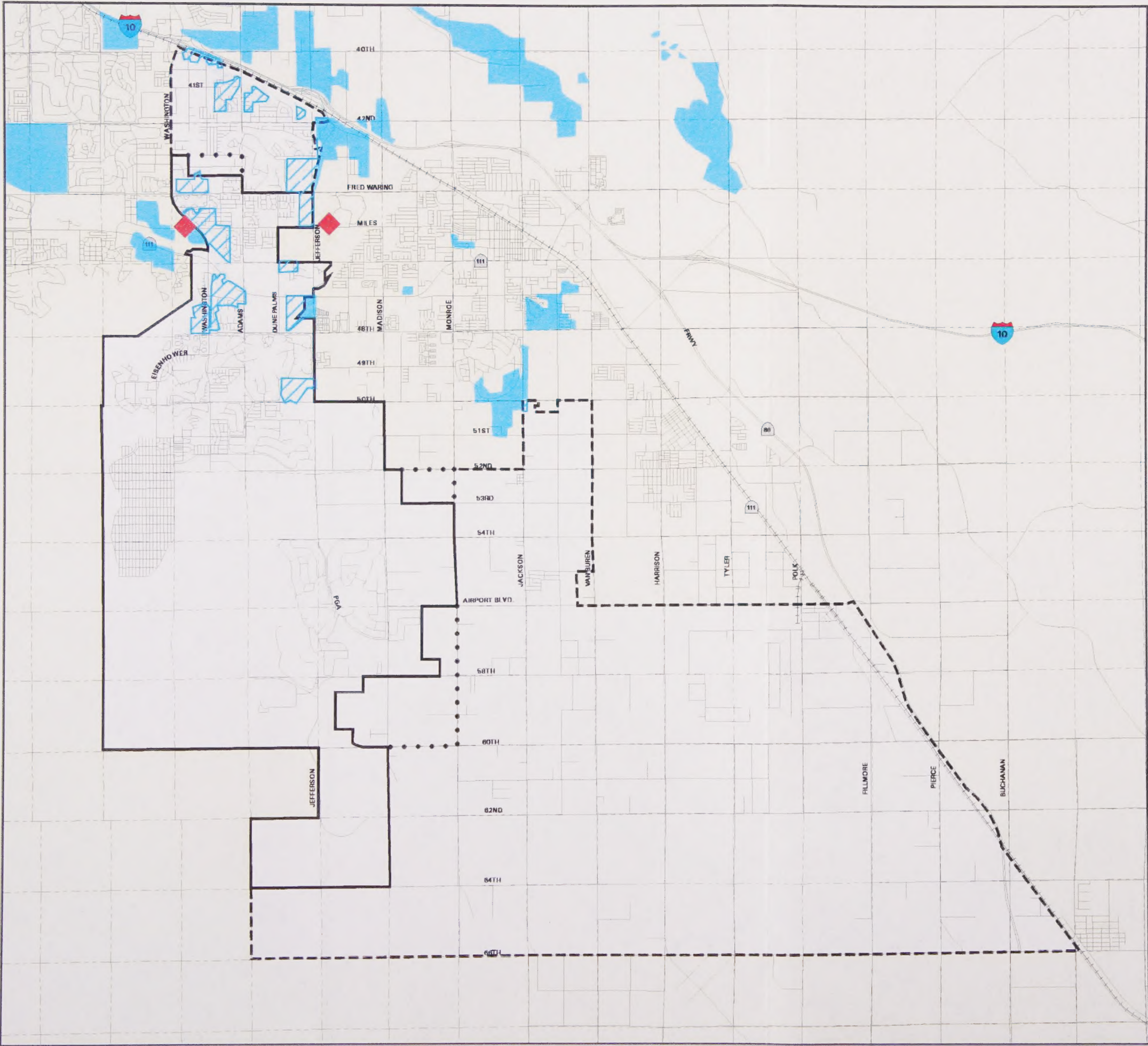


Map Prepared on: July 10, 2000

Map Prepared by: Aerial Information Systems

Map Version No.: 5





City of La Quinta General Plan

LEGEND

- Roads
- Township/Range Sections
- Railroads
- City Limits
- General Plan Planning Area
- City Sphere of Influence

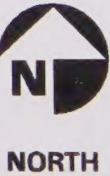
Exhibit III-24 Coachella Valley Sand Treader Cricket

- Coachella Giant Sand Treader Cricket Potential Distribution
- Recommended Survey Area
- Coachella Giant Sand Treader Cricket Archived Locations

Source: Lawrence F. LaPre, Ph.D., June, 2001

Scale
1:90,000

0 6,250 12,500 18,750
Feet

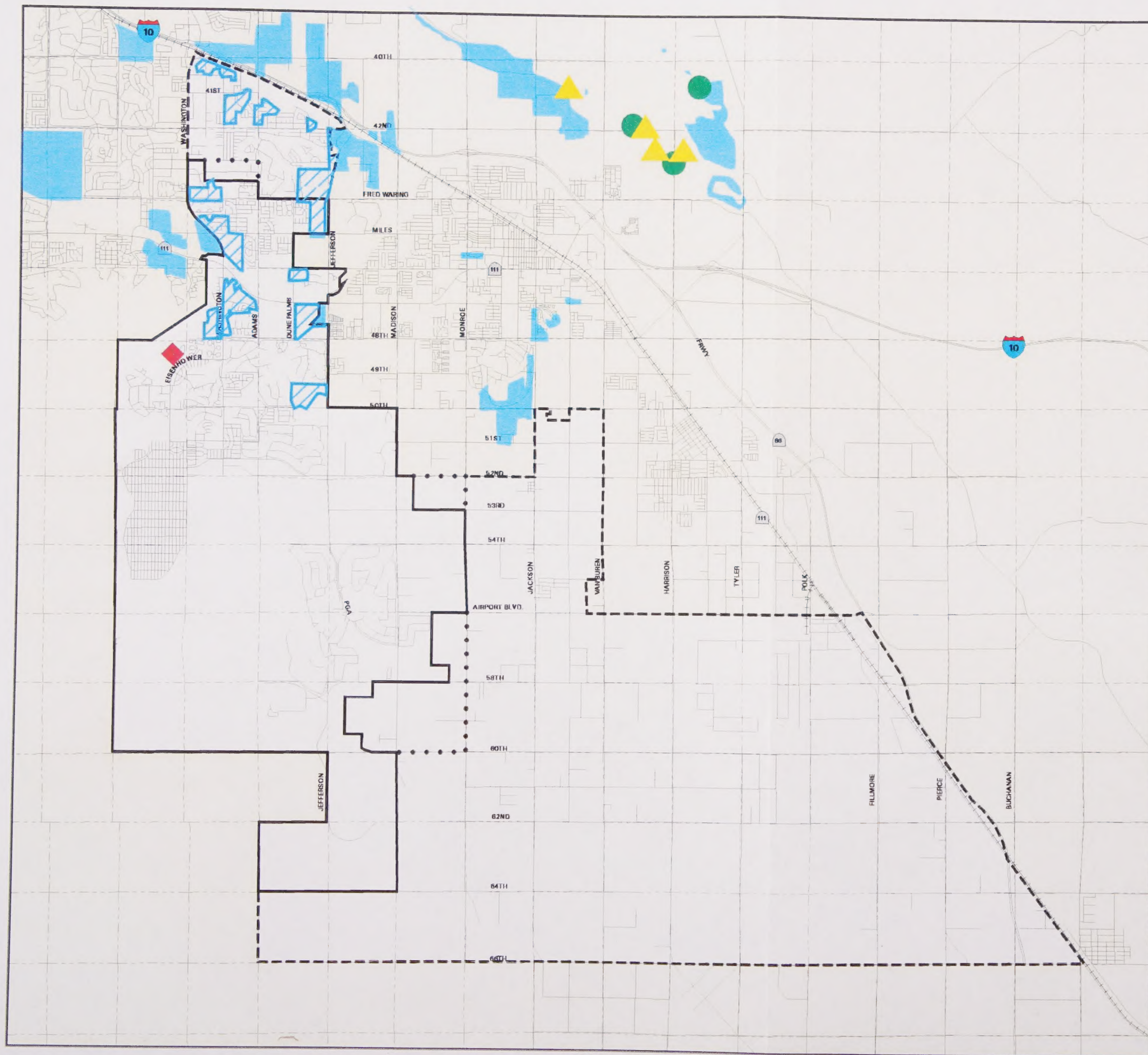


Riverside County Vicinity Map



Map Prepared on: July 10, 2000
Map Prepared by: Aerial Information Systems
Map Version No.: 5





City of La Quinta General Plan

LEGEND

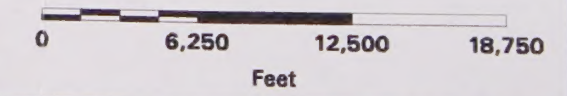
- Roads
- Township/Range Sections
- Railroads
- City Limits
- General Plan Planning Area
- City Sphere of Influence

Exhibit III-25 Flat-Tailed Horned Lizard

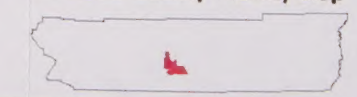
- Flat-tailed Horned Lizard Potential Habitat
- Recommended Survey Area
- Flat-tailed Horned Lizard Known Locations
- Flat-tailed Horned Lizard Archived Locations
- Flat-tailed Horned Lizard Scat Locations

Source: Lawrence F. LaPre, Ph.D., June, 2001

Scale
1:90,000



Riverside County Vicinity Map



Map Prepared on: July 10, 2000
Map Prepared by: Aerial Information Systems
Map Version No.: 5



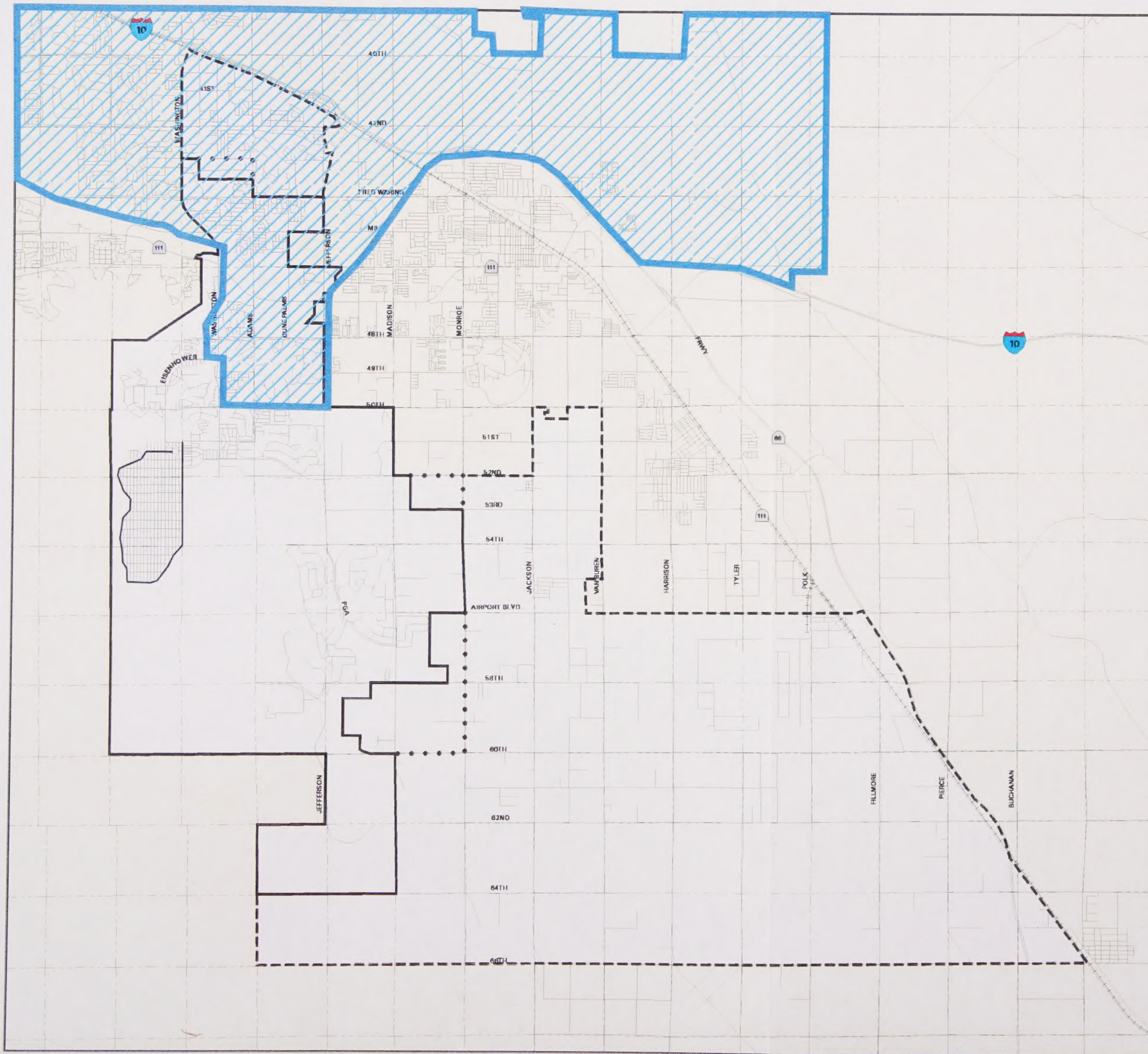
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City of La Quinta General Plan

LEGEND

- Roads
- Township/Range Sections
- Railroads
- City Limits
- General Plan Planning Area
- City Sphere of Influence

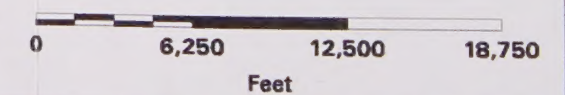
Exhibit III-26 Coachella Valley Fringe-Toed Lizard Fee Mitigation Area



Fringe-toed Lizard Fee Area

Source: Lawrence F. LaPre, Ph.D., June, 2001

Scale
1:90,000



NORTH

Riverside County Vicinity Map



Map Prepared on: July 10, 2000
Map Prepared by: Aerial Information Systems
Map Version No.: 5





Santa Rosa Mountains Wilderness

The Santa Rosa Mountains Wilderness extends across the southern Coachella Valley, in the foothills and upper elevations of the Santa Rosa Mountain range. The wilderness contains a total of approximately 20,160 acres, most of which are federally owned. It provides a range of diverse wildlife habitats for Peninsular bighorn sheep, California ditaxis, coyote, bobcat, golden eagle, prairie falcon, a variety of bats, and other species.

Portions of the wilderness are managed for the protection of the Peninsular bighorn sheep, through the implementation of the Santa Rosa Mountains Wildlife Habitat Management Plan. Adopted in 1980 by the California Department of Fish and Game (CDFG) and Bureau of Land Management (BLM), the Plan addresses the management of lands owned by CDFG, BLM, USFWS, the University of California, Agua Caliente Band of Cahuilla Indians, and private parties. The Plan establishes policies which provide for public use of wildlife habitat areas in a manner which minimizes impacts to the bighorn and its habitat.

Lands along the southern perimeter of the La Quinta Cove, and mountains to the south and west occur within the boundaries of the Management Plan. BLM and CDFG provide thorough review of applications for new trails, access roads, mining and grazing activities, and other projects which may disturb bighorn use of the area.

Sections 25 and 30, Township 6 South, Range 6 East, in the southwesterly portion of the planning area are designated as a Wilderness Study Area. Due to their natural, pristine character, these lands may be designated as Wilderness Areas by Congress in the future.

Santa Rosa Mountains State Game Refuge

The Santa Rosa Mountains State Game Refuge was established by the state legislature in 1917 and expanded in 1967, primarily for the protection of the Peninsular bighorn sheep. The Refuge is managed by the California Department of Fish and Game. It essentially provides habitat protection for wildlife and makes it illegal to possess firearms, bows and arrows, and any bird, mammal or reptile within the refuge. Much of the Santa Rosa Mountain range, including the mountains south and west of the La Quinta Cove, is included in the refuge.

Coachella Valley Multi-Species Habitat Conservation Plan

Habitat conservation plans that address the needs of more than one species or habitat have become an increasingly popular management strategy for protecting unique and valuable biological resources. The City of La Quinta and other members of the Coachella Valley Association of Governments (CVAG) are currently in the process of preparing the Coachella Valley Multiple Species Habitat Conservation Plan (CV MSHCP). The CV MSHCP is designed to conserve large, contiguous undeveloped habitat areas for a wide range of plant communities and special-status animal species. The Plan will cover more than one million acres in the Coachella Valley and surrounding mountains.³⁸ Approximately 24 natural plant communities and 31 animal species are expected to be addressed in the MSHCP.

³⁸ "Background Information for the Coachella Valley Multiple Species Habitat Conservation Plan/Natural Communities Conservation Plan," prepared by the Coachella Valley Mountains Conservancy, March 20, 1998.

The Plan is intended to standardize mitigation and compensation measures for species of concern on a regional basis, and to satisfy the requirements of federal and state endangered species protection laws. Once adopted, the Plan is also expected to limit the need for project-by-project review of the potential effects of development activities on species of concern.

2. Project Impacts

Potential Direct and Indirect Impacts

The La Quinta General Plan planning area harbors lands which provide suitable habitat for a wide range of common and sensitive plant and animal species. Development facilitated by implementation of the proposed General Plan will result in both direct and indirect impacts to biological resources in the planning area.

The primary impacts are expected to be habitat loss, fragmentation and degradation. Additional impacts include the removal of breeding and foraging habitat, the removal of native vegetation and its inherent wildlife habitat value, and the associated loss of wildlife species. Where new landscaping is introduced, exotic and other non-native plants which may be potentially harmful to humans and animals may prevail. During site grading and construction, a number of native animal species will be displaced and/or eliminated. However, those species capable of adapting to human disturbance may be attracted to newly developed parcels.

Indirect impacts resulting from future development could include off-road vehicle use, trash dumping, and predation by domestic pets. Increased noise and vehicular activity, reduced air quality, and exploration of undeveloped areas by residents may also reduce and/or degrade natural habitat types occurring in the planning area.

Potential Impacts to Plants

Entire populations of common and sensitive plant species may be destroyed when sites are graded and developed. Some of these plant communities represent rather unique biological features of the Coachella Valley, including sand dunes, sand sheets, and mesquite hummocks, which host a variety of endemic wildlife. Development which occurs on blowsand habitat, or which acts as a barrier to natural aeolian processes, could destroy the federally endangered Coachella Valley milkvetch and/or its habitat. Development at the base of the Santa Rosa Mountains, could constitute a significant impact to species with extremely limited distribution, such as the California ditaxis and glandular ditaxis. Other native plant species could be replaced by, or be subject to competition for water, nutrients and space with exotic, non-native species.

Potential Impacts to Invertebrates and Reptiles

Increased urbanization also has the potential to affect special-status invertebrates and reptiles. The flat-tailed horned lizard, Coachella giant sand-treader cricket, and the Coachella Valley fringe-toed lizard are special-status species known to occupy desert dunes and sandy field habitats. The sandy habitat and mesquite hummocks that support these species could be destroyed or fragmented by urban development, and permanent loss of this habitat will impact individual animals as well as entire populations.

The construction of roads, buildings and fences, as well as landscaping materials and similar "barriers" may further disrupt the natural blowsand process, which could have long-term adverse impacts on the quality and extent of blowsand habitat. Flood channelization and related improvements could reduce or eliminate the habitat of desert tortoises and other species which utilize desert washes and drainages. Invertebrates and reptiles are particularly susceptible to the impacts of off-highway vehicle traffic and crushing from grading and construction activities.

Potential Impacts to Birds

Continued development in the planning area will result in habitat degradation and the direct loss of foraging and nesting sites for a variety of common and special-status bird species. Indirect impacts could include increased predation by domestic pets, increased competition for limited nesting sites, pesticide ingestion, and the introduction of parasites. Off-road vehicle activity is also believed to be extremely disruptive to some species, especially during the breeding season. Certain birds which are capable of tolerating human disturbance will continue to inhabit developed areas, and may be attracted to newly landscaped areas.

Bird species which occupy cliffs and hilly or mountainous terrain, including the prairie falcon and Golden eagle, will be particularly vulnerable to development that occurs within or adjacent to the slopes of the Santa Rosa and Coral Reef Mountains. Continued development on mesquite hummocks and thickets has the potential to destroy the habitat of such sensitive species as the crissal thrasher and LeConte's thrasher. The conversion of agricultural lands to urban development could affect burrowing owl populations, which excavate nests in the ground and can occur in high densities near agricultural lands, where rodent and insect prey are abundant.

Potential Impacts to Mammals

A full range of common and special-status mammals may be adversely impacted by direct habitat loss and fragmentation and other human disturbances. A number of sensitive bat species, including the southern yellow bat, are associated with water sources provided by Lake Cahuilla County Park, PGA West, the La Quinta Hotel and other golf course developments adjoining hillsides. Bats may also roost in abandoned mines in the Santa Rosa Mountains, under bridges over the Whitewater River, and in groves of untrimmed palm trees. Continued development could result in the loss and/or abandonment of roosting and foraging habitat.

Smaller mammals are also susceptible to the direct and indirect impacts of continued development. The Palm Springs little pocket mouse has been documented on flat terrain with sandy, undisturbed soils throughout the planning area. The Palm Springs round-tailed ground squirrel prefers sandy flats and dunes, but is also known to occur in mesquite hummocks below the shoreline of ancient Lake Cahuilla and flood control channels throughout the Coachella Valley. These and other small mammals are susceptible to the impacts of off-road vehicles, predation by domestic pets, and surface disturbances that could crush their burrows.

The rocky hillsides of the Santa Rosa Mountains contain suitable habitat for the Peninsular bighorn sheep. Historically, direct impacts to the species have been rare in the La Quinta area due to limited development on the mountainous slopes. This is expected to continue with implementation of the

City's Hillside Conservation Zone Ordinance. However, future development at the base of the mountains may result in indirect impacts which could be significant without mitigation. Potential indirect impacts include exposure of sheep to toxic plants and groundcovers, and parasites and other disease vectors, as well as increased risk of collision with vehicles. Bighorn have also been known to abandon hillside habitat which has been disturbed by humans through hiking, equestrian use, and other recreational activities.

Proposed Annexation No. 12 and Sphere of Influence Amendment

Buildout of the proposed annexation and sphere of influence amendment areas is expected to result in many of the direct and indirect impacts identified above. However, these impacts are not expected to be significant, and given that no development projects are planned for construction in the immediate future, impacts to biological species are expected to occur gradually.

Neither the annexation area, nor the SOI amendment area is located within a highly sensitive biological habitat area. Neither area is located within the boundaries of the Coachella Valley Fringe-Toed Lizard Habitat Conservation Plan, Santa Rosa Mountains Wilderness, or Santa Rosa Mountains State Game Refuge. Although the southwestern corner of the annexation area is immediately adjacent to essential habitat for the Peninsular bighorn sheep, the annexation area itself does not contain essential habitat. Neither area occurs within the potential distribution area of the Coachella giant sand-treader cricket or Flat-tailed horned lizard.

Much of the annexation and SOI amendment areas have already been disturbed by rural development or agricultural activities. Approximately 4,160 acres (77%) in the annexation area and 6,890 acres (84%) in the SOI amendment area are developed and, therefore, have been disturbed by grading, excavation, cultivation, disking or related activities. Actively cultivated agricultural lands provide little viable habitat for native plants and wildlife species, with the exception of burrowing owls, and animals that are present may be subject to the ingestion of pesticides and/or other chemicals.

Vacant acres in the annexation and SOI amendment areas, however, may still contain suitable foraging and nesting habitat for a variety of endemic wildlife species. Limited acreage at the extreme southwestern corner of the proposed annexation area, illustrated in Exhibit III-23, is considered potentially sensitive for the desert tortoise, and may also contain glandular ditaxis and California ditaxis. Development proposed within this area will be required to conduct focused surveys for these species. The same areas, as well as limited lands south of Avenue 52, may be sensitive for the Palm Springs little pocket mouse. Scattered lands in the proposed annexation and SOI areas, particularly south of Avenue 58 and in the vicinity of Desert Resorts Airport, may contain suitable habitat for the Palm Springs round-tailed ground squirrel.

The primary impact associated with future development in the annexation and SOI areas is the potential loss, fragmentation and degradation of viable habitat. Elements of the built environment, including buildings, roads, and landscaping may function as barriers that interrupt natural sand transport processes and threaten the viability of blowsand endemics. Grading and construction activities are likely to result in the crushing of invertebrates and reptiles, collapse of small mammals' burrows, and temporary or permanent removal of mammals and birds from the site. The

burrowing owl, which is known to inhabit underground nests on or near agricultural lands, could be adversely impacted by the conversion of agricultural lands to urban uses. Future development will generate increased vehicular traffic, which will increase the potential for animal injuries and/or deaths resulting from automobile collisions. The introduction of domestic pets to the area may result in an associated increase in predation and exposure of wildlife species to parasites. Native plant species could be replaced by, or subject to competition from, exotic species.

Development in the annexation and SOI amendment areas may also have limited positive impacts on biological species. Birds and small mammals that are capable of tolerating human disturbances may be attracted to landscaped common areas and yards that include native trees, plants, and other landscaping materials, as well as on-site water retention/detention basins or other water sources.

Without mitigation, buildout of the General Plan, Annexation No. 12 and the Sphere of Influence Amendment will result in significant impacts associated with biological resources.

3. Mitigation Measures

In order to ensure that impacts associated with biological resources are reduced to a less than significant level, the following mitigation measures shall be implemented:

- A. The Land Use Element of the General Plan shall designate all areas above the toe of slope of the Santa Rosa and Coral Reef Mountains as Open Space for the protection of the Peninsular bighorn sheep and other species occurring in these habitats.
- B. The Land Use Element shall designate Sections 25 and 30, Township 6 South, Range 6 East, which occur within the Santa Rosa Mountains Wilderness Study Area, as Open Space.
- C. Development occurring within the mitigation fee boundaries of the Coachella Valley Fringe-toed Lizard Habitat Conservation Plan shall pay the mitigation fee in effect prior to the issuance of building permits. The mitigation fee will also comply with the state endangered species act, according to the Memorandum of Understanding by the Department of Fish and Game, Riverside County and the cities of the Coachella Valley after it is signed by the CDFG. Until that time, a separate incidental take authorization from the state will be necessary for projects in blowsand habitat where the fringe-toed lizard is present.
- D. Undeveloped lands that have not been graded, cleared, or farmed at the base of the Santa Rosa and Coral Reef Mountains (as illustrated on Exhibit III-23) shall be surveyed at the appropriate season for the presence of glandular ditaxis, California ditaxis and desert tortoise.
- E. The City shall continue to participate in the development of the Coachella Valley Multi-Species Habitat Conservation Plan.

- F. Sand deposits throughout the study area shall be surveyed at the appropriate season for the presence of blow sand endemics, including the flat-tailed horned lizard, giant sand-treader cricket, Coachella Valley milkvetch, and slender woolly-heads. Areas requiring surveys are illustrated in Exhibits III-24 and III-25.
- G. Projects supported by a federal nexus (such as a Corps of Engineers permit or Department of Housing and Urban Development funds) shall be surveyed for the Coachella Valley milkvetch because of its status as a listed species under the Endangered Species Act.
- H. Agricultural lands being converted to development shall be surveyed for the presence of burrowing owls, according to California Department of Fish and Game protocol.
- I. Large-scale developments, such as country clubs, shall be encouraged to establish groves or plantings or untrimmed palm trees which could provide roost sites for the southern yellow bat.
- J. Projects involving reconstruction of bridges shall perform biological surveys including bats to determine the presence of significant roosts.
- K. The City shall consider requiring barriers around the perimeter of any new project that borders the hillsides to protect bighorn sheep if they are demonstrated to occur on the project site. Informal consultation and/or review by the U.S. Fish and Wildlife Service and California Department of Fish and Game shall be completed prior to construction of a barrier.
- L. The City shall support and promote the integration of biological resource and open space/conservation principles into the design and development of roadways and highways, stormwater detention/retention basins, and public parks and private open space areas.
- M. To protect and further enhance native desert habitat in the built environment, the City shall encourage developers to salvage naturally occurring desert plant materials for incorporation into project landscaping to the greatest extent possible, and shall indicate utilization of these indigenous materials on project landscape plans, which provide or enhance wildlife habitat and serve to extend the local desert environment into the urban design of the City. Plans shall be submitted to the City for approval.
- N. A comprehensive planting materials list shall be prepared by the City, which shall include native and non-native, drought tolerant trees, shrubs and groundcovers that complement the local environment, provide habitat for local wildlife, and extend the desert into the built environment. A list of prohibited plant materials shall also be prepared.
- O. The General Plan Land Use, Circulation, and Open Space Elements shall recognize, reflect and provide an effective buffer between urban development and other incompatible uses, and the Santa Rosa and Coral Reef Mountains, and other sensitive wildlife and open space and conservation lands.

- P. The City shall consult and coordinate with the Coachella Valley Water District, Imperial Irrigation District, and other appropriate public and quasi-public agencies, to encourage the establishment of a system of multiple use corridors for wildlife and public interconnection between open space areas in the community and vicinity.

Mitigation Monitoring/Reporting Program

- A. Potential impacts of development projects on biological resources shall be evaluated through the Initial Study review process. Impacts shall be clearly documented and mitigation measures recommended where appropriate.
Responsible Parties: Community Development Department, Developer/Consulting Biologist.
- B. Prior to the issuance of building permits, the City shall assure that all required biological resource mitigation actions, including but not limited to off-site mitigation and/or the payment of impact fees, have been satisfied.
Responsible Parties: Community Development Department, Building Department, Developer/Consulting Biologist.
- C. Inspections during development grading and construction shall be monitored to assure conformance with grading limits, and to assure the preservation and integration of native and other appropriate desert landscape materials into all areas of the project in conformance with the approved landscape plan.
Responsible Parties: Community Development Department, Building Department, Developer/Consulting Biologist.
- D. City staff shall review biological resource reference materials and update City records and inventories on an annual basis to assure timely and adequate maintenance of a resource database.
Responsible Parties: Community Development Department, Consulting Biologist

H. Cultural Resources

The following discussion is largely based upon a cultural resources study which was prepared for the City by CRM Tech, in conjunction with the preparation of the General Plan Update.³⁹ The study can be found in Appendix B of this document.

1. Existing Conditions

Cultural resources are an integral part of a community and provide residents with a meaningful sense of history and heritage. Because it straddles the shoreline of ancient Lake Cahuilla, the City of La Quinta is contains one of the most dense concentrations of archaeological sites in California.

³⁹ "Cultural Resources Element, City of La Quinta General Plan" prepared by CRM Tech, August 2, 2000.

Cultural resources in the planning area range from prehistoric Native American villages and rancherias, to twentieth century date palm groves and the La Quinta Hotel.

Pre-Historic Settlement in the Planning Area

The “prehistoric” period refers to time before the arrival of non-Indians. In the Coachella Valley, the prehistoric period began with the Archaic Period, which occurred before A.D. 1000. This period involved important cultural changes, including a change in burial practices to cremations around 500 B.C., and the introduction of the bow-and-arrow around A.D. 500.

The introduction of pottery to the Coachella Valley after A.D. 1000 marks the beginning of the Late Prehistoric era in this region. Pottery was an innovation of peoples of the Colorado River, and its presence in the Coachella Valley indicates that contact occurred between inhabitants of the Coachella Valley and Colorado River settlements.

The most recently identifiable native culture to evolve in the Coachella Valley region is the Cahuilla. The Cahuilla were a Takic-speaking, hunting and gathering people who are generally divided into three groups by anthropologists: the Pass Cahuilla of the Banning-Beaumont area, the Mountain Cahuilla from the Santa Rosa and San Jacinto Mountains, and the Desert Cahuilla from the eastern Coachella Valley, as far east as today’s Salton Sea. Each clan, or lineage, had its own food harvesting areas, ceremonial house, and lineage chief. However, a number of lineages are known to have cooperated with one another for political, social and economic purposes.

Surveys performed by the U.S. Government Land Office (GLO) in the mid-1850s noted a total of eight Native American villages, or rancherias, in or near the La Quinta planning area. All or most of these settlements are believed to have been settlements of the Desert or Pass Cahuilla people. Two prominent settlements, known as Toro and La Mesa, were located within the boundaries of the planning area, while six other Cahuilla settlements were observed within an approximately one-mile radius. A number of other features, believed to have been made by the Cahuilla, were also observed in the planning area, including several wells and a network of roads and trails.

The first Cahuilla contact with Europeans occurred in the 1770s, when Spaniards crossed through Cahuilla territory in search of new land routes between Mexico and northern California.⁴⁰ As time passed, relations between European settlers and the Cahuilla became strained due to conflicts over land ownership and exploitation, and religious and cultural practices. European disease, to which the Cahuilla had no immunity, furthered the gap between Indian and non-Indian relations. A smallpox epidemic in the early 1860s decimated the Cahuilla population, which declined from an estimated 6,000 to 10,000 people to only 2,500 individuals.⁴¹ By the time the La Quinta area was re-surveyed by the U.S. government in the early twentieth century, most of the villages and rancherias noted from earlier surveys had vanished, and signs of Euroamerican influence, such as fences and irrigation ditches, were observed. The Cahuilla continue to inhabit parts of the Coachella Valley today, and are mostly affiliated with one or more of the Indian reservations in the Valley. Among these are the Torres Martinez, Augustine, Agua Caliente, Cabazon and Morongo, most of which are located in close proximity to the City of La Quinta.

⁴⁰ The Cahuilla, Bean, Lowell John and Lisa Bourgeult. Chelsea House Publishers, 1989.

⁴¹ Ibid.

Historic Settlement of the Planning Area

By the late eighteenth century, Spanish explorers sought to colonize California before other European nations, and established religious missions and military strongholds along the California coast. Mission San Diego, the first permanent mission established by the Spanish, was built in 1769. By the 1770s, explorers entered the Coachella Valley region in search of easily passable supply routes from Mexico to colonies on the northern Monterey Peninsula of California.

In 1822, Mexico secured its independence from Spain under the Treaty of Cordova, and Spanish forces were driven out of Mexico and California. Mexican exploration of the Coachella Valley region continued, and numerous ranches and agricultural enterprises were established. In many cases, Mexican land owners relied upon Cahuilla Indians for ranch management and labor.

The United States defeated Mexico in 1848 in the Mexican-American War and gained control of California. At the same time, the discovery of gold and the appeal of cattle ranching led to an influx of new settlers. California was admitted into the Union in 1850.

The Cocomaricopa Trail, an ancient Indian trading route which passed through the Coachella Valley, provided a valuable connection between the coastal region of California and the Colorado River. In 1862, the route was “rediscovered” by William David Bradshaw and renamed the Bradshaw Trail. One month after its opening, stagecoach and passenger service began serving travelers along the road, and the trail later became part of the U.S. Mail route between Los Angeles and Santa Fe, New Mexico.⁴² Until the late 1870s, the Bradshaw Trail served as an important thoroughfare between the Los Angeles area and the gold fields near present-day Ehrenberg, Arizona.

The expansion of the transcontinental railroad, which connected the California coast with Yuma, Arizona, combined with the depletion of the Colorado gold mines, eventually led to a discontinuation of freight service over the Bradshaw Trail. Traffic over the road had declined to almost nothing by 1880, but ranchers and miners continued to use it for local transport.⁴³ The Bradshaw Trail was revived after the turn of the century, with the advent of the automobile, and today the old wagon route is closely followed by State Highway 111.

Non-Indian settlement in the Coachella Valley began in the 1870s, with the establishment of railroad stations along the Southern Pacific line. The rate of settlement increased significantly in the 1880s, after public land was opened for claims under the Homestead Act, Desert Land Act and other federal land laws. With the availability of underground water resources, farming became the dominant economic activity in the Coachella Valley. The date palm was introduced to the area around the turn of the century, and became the area’s main agricultural staple.

By the 1920s, the resort industry had begun to spread throughout the Coachella Valley. The construction of the La Quinta Hotel in 1926, by Walter H. Morgan and his Desert Development

⁴² Gold Road to La Paz: An Interpretive Guide to the Bradshaw Trail, Ross, Delmer G. Tales of the Mojave Road Publishing Company.

⁴³ Ibid.

Company, provided the impetus for more “winter resort” development in the La Quinta area. In the early 1930s, E.S.”Harry” Keiner began subdividing the Cove area and marketing the sale of furnished weekend homes. Although the rest of the La Quinta area remained predominantly rural during this period, with scattered ranch-style houses, the planning area experienced rapid growth during the post World War II era. The City of La Quinta was incorporated on May 1, 1982.

Documentation of Cultural Resources

Archaeological studies and surveys are prepared to satisfy the requirements of current county, state (CEQA), and federal (NEPA) laws and guidelines pertaining to the identification and preservation of prehistoric and historic sites on property proposed for development. The Eastern Information Center (EIC) at the Archaeology Research Unit of the University of California-Riverside, which acts as a regional repository for research in cultural resources, has a number of field surveys and other cultural records on file.

A review of these records indicates that approximately 50% to 60% of the La Quinta planning area has been surveyed for cultural resources since the 1970s, particularly in the eastern portion of the planning area where resort and other development has been concentrated in the past several decades. The most common types of archaeological and historic sites identified in the planning area and surrounding region are briefly described below.

Archaeological Sites

1. Village sites: Villages are the most significant sites identified. They are generally located in areas that offer optimal climate, food, water, and materials. Occupied for extended periods of time, village sites are recognized by rich deposits of organic, ashy soil often containing artifacts and plant and animal remains.
2. Campsites and Temporary Habitation Sites: These sites are similar to villages but are shallower and contain fewer artifacts.
3. Milling Stations: These are sites in which grinding, pounding, and processing was performed on food materials.
4. Lithic Quarries: Quarries are outcrops of certain types of rock used in tool-making.
5. Lithic Reduction Sites/Lithic Workshops: Lithic workshops are areas in which rocks were reduced and shaped into tools and other useful materials.
6. Aboriginal Trails: The remains of Indian trails that were likely used as important travel corridors.
7. Sparse Lithic Scatters: These sites include the remains of stone-making activities.
8. Pot Drops: Areas in which pottery fragments from the breakage of a single vessel are identified.
9. Rock cairns and rock art sites: A rock cairn is a collection or mound of stones that served as a memorial or landmark. Rock art sites include pictographs, petroglyphs, and cupule boulders.

Historic Sites

(A historic site includes any area more than 45 years old that contains evidence of human activity.)

1. Homes/Ranches: These sites include intact structures or the remnants of house foundations, wells, fences and rock walls, out buildings, and other features associated with living activities.

2. Roads/Trails: Corridors that were important transportation and/or trading routes.
3. Mining Sites: Mining sites include mine shafts, equipment associated with mining, and shallow pits in which minor prospects may have occurred.
4. Trash Dumps/Can Scatters: These sites contain trash that can be accurately dated.

Archaeological Resources in the Planning Area

Because of its unique location straddling the shoreline of ancient Lake Cahuilla, the City of La Quinta contains one of the most dense concentrations of archaeological sites in California. A survey of the cultural resources records on file at the Eastern Information Center indicates that approximately 372 archaeological sites have been recorded to date in the planning area and within a one-mile radius. The majority of these sites represent Indian settlement associated with ancient Lake Cahuilla. Scatters of pottery, burned animal bone, grinding stones, cremations, and other remains have been identified along the historic shoreline of ancient Lake Cahuilla, which is believed to have occurred at a 42-foot elevation until its complete desiccation around AD 1700.

Recent research has also identified sites dating from earlier times buried deep within local sand dunes. One site, located just outside the City limits at the intersection of Fred Waring Drive and Jefferson Street, dates back to 2,700 years ago and has proven to be the oldest site yet discovered in the Coachella Valley. Another site within the City limits has been dated to 2,300 years ago, and two sites have proven to be 1,600 years old. These sites are also believed to be related to ancient Lake Cahuilla, which has come and gone several times within the last two millennia.

Historic Resources in the Planning Area

A number of historic sites have been identified and recorded in the La Quinta planning area. From 1981 to 1983, the Riverside County Historical Commission recorded 36 historic buildings or building groups, a historic cemetery, and a historic canal inside or within a one-mile radius of the planning area. The City of La Quinta completed its own historical resources survey during 1996 and 1997, which resulted in the recordation of an additional 67 historic properties, most of which were historic buildings.⁴⁴ Since that time, another 14 structures have been recorded during project-related surveys, for a combined total of 117 historic resources in the planning area. The majority of these are of late 1930s and 1940s vintage. However, the oldest are a cemetery and Catholic Church on the Torres-Martinez Indian Reservation, which date back to 1876 and 1894, respectively. A complete listing of historical resources in the planning area can be found in Appendix B.

As part of the 1996-1997 city-wide historical resources survey, the City of La Quinta designated the Cove area as a historic district.⁴⁵ The Cove was the City's first residential subdivision, and most of its buildings are constructed in the Spanish Colonial Revival style of architecture.

The National Register of Historic Places is a nationwide inventory of districts, sites, buildings, structures, or objects of national, state, or local historical significance. Currently, two sites in the vicinity of the planning area are listed in the National Register. These include the Coachella Valley Fish Traps, a 208± acre archaeological site which straddles the southern planning area boundary, and the Martinez Historic District, which lies just outside the southern planning area boundary.

⁴⁴ Mellon and Associates, City of La Quinta Historic Resources Survey, Volume 2: Survey Forms. 1997. On file at the City of La Quinta.

⁴⁵ O'Connor and Steigemeyer, Historical resources record, La Quinta Cove Thematic Historic District, 1997. On file at the City of La Quinta.

Numerous archaeological sites within the planning area have been determined to be eligible for listing in the National Register.

The California Office of Historic Preservation (OHP) maintains the California Register which includes all properties listed in or officially determined to be eligible for listing in the National Register. The OHP also maintains a register of California Historical Landmarks for properties of statewide historic importance, and Points of Historical Interest for properties of county-wide or regional importance. At this time, there are no California Historical Landmarks within or adjacent to the La Quinta planning area. However, there is one Point of Historical Interest within the planning area: the site of Toro. Three Points of Historical Interest are located within a one-mile radius of the planning area: the site of Palma Seca Well, the Martinez Indian Agency (part of the Martinez Historic District), and the Valerie Jean Date Garden.

Programs Administered by the City of La Quinta

The City of La Quinta has taken a proactive role in assuring that cultural resources within its incorporated limits are adequately surveyed, documented, and preserved, where appropriate. In response to development pressures in the La Quinta area and an associated increase in the number of cultural resources surveys being prepared, the City has adopted official guidelines pertaining to the qualification requirements for archaeological consultants. The City has also developed programs to implement the transfer of development rights and application of the State Historic Building Code.

Historic Preservation Ordinance

In 1991, the City of La Quinta drafted its first Historic Preservation Ordinance and established a Historic Preservation Commission, which was composed of members of the City's Planning Commission. The Ordinance was subsequently amended to reflect State Office of Historic Preservation requirements for the Certified Local Governments program, and was adopted in 1993.

In 1994, under the amended ordinance, an independent Historic Preservation Commission was created. It consists of five members who have demonstrated an interest in, and knowledge of, historic preservation and the City's cultural resources. The Commission is responsible for "reviewing the conduct of land use, housing and development, municipal improvement and other types of planning and programs undertaken by any agency of the city, the county or state, as they relate to the historic preservation of the community."⁴⁶

The amended ordinance also established a local historical resources inventory and procedures for the designation of landmarks and historic districts, all of which are administered by the Historic Preservation Commission. The historic resources inventory has been prepared, and encompasses all properties listed in Appendix 2 of the Cultural Resources Study provided in Appendix B of this document. The landmark program has not yet been implemented.

2. Project Impacts

Historically significant sites and structures are those that are 45 years of age or older and provide evidence of past human activities. Appendix K of the California Environmental Quality Act (CEQA)

⁴⁶ La Quinta Municipal Code, Section 7.04.030(C.1).

Guidelines articulates that cultural resources must be evaluated for their importance or significance.⁴⁷ “An important archaeological resource” is defined by CEQA as one which:

- A. Is associated with an event or person of:
 - 1. Recognized significance in California or American history, or
 - 2. Recognized scientific importance in prehistory;
- B. Can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable or archaeological research questions;
- C. Has a special or particular quality such as oldest, best example, largest, or last surviving example of its kind;
- D. Is at least 100 years old and possesses substantial stratigraphic integrity; or,
- E. Involves important research questions that historical research has shown can be answered only with archaeological methods.

Considering the high number of known archaeological and historic sites within the planning area, no undeveloped lands should be considered free of historical resources prior to being investigated. Mountainous slopes, canyons and alluvial fans, in particular, have been shown to contain ancient trails, rock cairns, and other signs of prehistoric occupation. Rolling sand dunes have been known to harbor evidence of Native American occupation associated with ancient Lake Cahuilla. Silty flat lands in the eastern planning area, which are now largely in active cultivation, contained more recent Native American and Euroamerican settlements.

It is likely that additional sites and structures may be discovered during future development. Future development projects could potentially result in direct and/or indirect disturbance or destruction of sensitive archaeological and historic resources. Impacts may include grading activities, site excavation, construction, and increased foot and vehicular traffic. Site surveys should be conducted on all future development projects on previously undeveloped land, to determine the presence and significance or archaeological and historic resources.

Proposed Annexation No. 12 and Sphere of Influence Amendment

As described earlier in this section, the vast majority of archaeological sites identified in the General Plan planning area are associated with Indian settlement in the vicinity of Ancient Lake Cahuilla. Pottery scatters, grinding stones, charred animal bones, and evidence of cremations and other remains have been identified along the historic shoreline of Ancient Lake Cahuilla, indicating the presence of a dense population in the 17th and 18th centuries. Since 1981, nearly 120 historic buildings and sites have been recorded in the General Plan planning area during historical resources surveys conducted by the City of La Quinta, Riverside County, and other parties.

⁴⁷ “California Environmental Quality Act - Statutes and Guidelines.” Prepared by the Governor’s Office of Planning and Research, State of California, June 1992. Appendix K: Archaeological Impacts.

The proposed annexation and SOI amendment areas are located in the heart of this culturally sensitive area, and virtually no undeveloped land within their boundaries should be considered free of cultural resources. Rolling sand dunes and the silty, bedded flatlands, which are now mostly in agriculture, were once home to the Cahuilla and early Euro-American settlers. Some of the archaeological and historical resources identified in the annexation and SOI amendment areas include Indian rancherias, historic roads and trails, irrigation ditches, fences, and other evidence of past human activity. More than 30 archaeological sites, including major concentrations of Indian artifacts, were identified in the cultural resources survey for the Coral Mountain Specific Plan at the southwest corner of the proposed annexation area. Although these lands were once actively cultivated, their artifacts were preserved. Therefore, the potential sensitivity of other agricultural lands in the annexation and SOI amendment area cannot be discounted.

Buildout of the annexation and SOI amendment areas could result in the disturbance and/or destruction of archaeological and historic resources. Development activities, including grading, excavation, paving and building construction, as well as increased foot and vehicular traffic, could damage or destroy sensitive artifacts. Given that additional sites and resources may be discovered during future development, site surveys should be required as part of the initial project review process on all future development projects on undeveloped and agricultural lands. The mitigation measures described below are also applicable to future development in the proposed annexation and SOI amendment areas.

Without mitigation, buildout of the General Plan, Annexation No. 12 and the Sphere of Influence Amendment will result in significant impacts associated with cultural resources.

3. Mitigation Measures

The preservation of local cultural resources is an important step in maintaining the Coachella Valley's cultural heritage. The City of La Quinta is responsible for assuring that every reasonable effort is made to identify and evaluate cultural sites within its jurisdiction. The City must determine which development activities could potentially have an adverse impact on historically significant sites.

The California Environmental Quality Act (CEQA) Statutes and Guidelines define the manner in which the City must address issues related to archaeological and historic resources. Project involving a federal agency, federal funding, or some other federal assistance must conform to Section 106 of the National Historic Preservation Act of 1966 (NHPA).

In order to ensure that impacts associated with cultural resources are reduced to a less than significant level, the following mitigation measures shall be implemented:

- A. The City shall maintain and update on a regular basis its existing historic resources inventory, to reflect the current status of historic resources, identify potential historic resources, and include non-traditional property types.

- B. The City shall develop a strategy for conducting cultural resource surveys of currently unsurveyed areas of the planning area, and assure that newly identified resources are incorporated into the City's historic resources inventory.
- C. The City shall proactively promote the preservation of historical resources by increasing its influence over historical resources within its jurisdiction, and by developing the necessary procedures to acquire historical resources, where appropriate.
- D. The City shall develop a system of incentives and regulations that encourage the preservation, maintenance and/or rehabilitation of historical resources by property owners, local citizens and private development projects, through the continuation and expansion of federal and state programs which provide tax and other incentives for the rehabilitation of historically and/or architecturally significant structures and other mechanisms.
- E. All development projects which require discretionary city action shall be reviewed by a qualified archaeologist, historian, and/or architectural historian, prior to final approval in order to identify potential impacts to historical resources and appropriate mitigation measures. All such sites shall be surveyed, unless the preponderance of evidence demonstrates that a survey is unnecessary.
- F. A qualified archaeologist and/or Native American representative shall provide on-site monitoring during ground-disturbing activities in areas of high sensitivity.
- G. The City shall adopt a proactive approach in code enforcement to prevent deterioration of historic buildings, structures and districts, and shall consider incorporating historic preservation into the City's zoning ordinance to create historic zoning districts and/or overlays, where appropriate.
- H. Develop and implement a systematic program aimed at advancing public awareness of and pride in the city's heritage.

Mitigation Monitoring/Reporting Program

- A. Potential impacts of development projects on cultural resources shall be evaluated through the Initial Study review process. Impacts shall be clearly documented and mitigation measures recommended where appropriate.
Responsible Parties: Community Development Department, Developer/Consulting Archaeologist/Historian, UC-Riverside Eastern Information Center.
- B. City staff shall review cultural resources reference materials and update City records and inventories on an annual basis to assure timely and adequate maintenance of the database.
Responsible Parties: Community Development Department, UC-Riverside Eastern Information Center.

I. Air Quality

1. Existing Conditions

One of the most important issues associated with public health and safety in a community is air quality. In relation to other areas in southern California, the City of La Quinta and the Coachella Valley have essentially good air quality. Although the region has exceeded the state and federal standards for some pollutants in the past, regional air quality levels have shown marked improvement in recent years. Continued implementation of air quality management programs and a local commitment to reducing air pollutants will have long-term beneficial impacts on the City's environment.

Climatic Conditions in the Coachella Valley

The City of La Quinta and the Coachella Valley comprise a geographically and meteorologically unique area which is effectively isolated from coastal influences by surrounding mountains. The resulting environment is a hot, dry, low-lying desert basin that is subject to strong and sustained winds. These winds suspend and transport large quantities of sand and dust, which can reduce visibility, damage property and constitute a significant health threat.

The Coachella Valley is also susceptible to air inversions, in which a layer of stagnant air is trapped near the ground where it is further loaded with pollutants. When combined with chemical aerosols and other pollutants emitted by automobiles, furnaces and other sources, this process can result in substantial haziness and a deterioration in ambient air quality.

Air Quality Management and Regulation

Both federal and state governments have established air quality standards for a variety of pollutants. At the federal level, the U.S. Environmental Protection Agency (EPA) is responsible for regulation of motor vehicle standards and other air pollution issues. In 1990, a series of amendments to the federal Clean Air Act (CAA) were enacted which were intended to intensify air pollution control measures nationwide. The amended CAA sets forth specific emission reduction goals, incorporates more stringent sanctions for failure to meet interim milestones, and requires a demonstration of reasonable progress in attaining federal air quality standards. The CAA also establishes deadlines for the submittal of State Implementation Plans (SIPs), which are directed at helping regional air quality management districts meet the ambient air quality standards and deadlines specified in the CAA.

The California Clean Air Act (CCAA) became effective on January 1, 1989 and mandated health-based air quality standards at the state level. The California Air Resources Board (CARB) is responsible for implementing the CCAA and oversees vehicle emission standards, fuel specifications, and consumer product standards, and other air quality issues at the state level.

Regional and local agencies have also assumed responsibility for assuring that air quality standards are achieved. The City of La Quinta and the surrounding Coachella Valley are located within the Salton Sea Air Basin (SSAB). The South Coast Air Quality Management District (SCAQMD) is responsible for monitoring regional air quality trends and formulating relevant management policies for the SSAB and neighboring air basins. The 1997 SCAQMD Air Quality Management Plan sets

forth policies and implementation measures designed to help the District satisfy the planning requirements of the federal Clean Air Act and the California Clean Air Act. The Southern California Association of Governments (SCAG) and Coachella Valley Association of Governments (CVAG) are also involved in these efforts.

Primary and Secondary Pollutants

Pollutants are generally classified in two categories: primary and secondary. Primary pollutants are those which are a direct consequence of energy production and utilization. These pollutants typically affect only local areas and do not undergo chemical modification or further dispersion. Primary sources and their pollutants are mostly a direct consequence of the combustion of petroleum and other fuels resulting in the production of oxides of carbon, sulphur, nitrogen and a number of reactive hydrocarbons and suspended particulates.

Secondary pollutants are those which undergo chemical changes after emission. These pollutants disperse and undergo chemical changes under conditions of high ambient temperatures and high rates of solar insolation. Principal secondary pollutants are termed oxidants and include ozone (O₃), peroxy nitrates, nitrogen dioxide (NO₂) and chemical aerosols.

Criteria Pollutants and Associated Health Effects

In an effort to protect public health, federal and state ambient air quality standards have been established for the following pollutants: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, lead and suspended particulate matter. A description of each pollutant and associated health impacts is provided below.

Ozone (O₃) is formed when byproducts of the internal combustion engine react in the presence of ultraviolet sunlight. Ozone is a pungent, colorless, toxic gas which is the main component of photochemical smog. Although ozone is produced within the Coachella Valley, most ozone pollutants are transported by coastal winds from Los Angeles County and the Riverside and San Bernardino areas into the Coachella Valley, thereby contributing to high ozone concentrations in the valley.⁴⁸ Exposure to ozone can result in diminished breathing capacity, increased sensitivity to infections, and inflammation of the lung tissue.

The Coachella Valley has a history of exceeding prescribed ozone standards, although the number of days and months exceeding the federal one-hour ozone standard have dropped steadily over the past decade. The Coachella Valley is classified as a "severe-17" ozone non-attainment area under the federal Clean Air Act. The area must comply with federal ozone air quality standards by November 15, 2007, which is 17 years from the date the Clean Air Act was enacted.⁴⁹

Although some ozone is produced locally by motor vehicles and other sources in the Coachella Valley, monitoring data indicate that federal ozone exceedances in the Coachella Valley are largely the result of pollutant transport from the South Coast Air Basin, through the Banning Pass, into the Coachella Valley.⁵⁰ Although it is difficult to quantify the total amount of ozone contributed from

⁴⁸ "1997 Air Quality Management Plan," South Coast Air Quality Management District.

⁴⁹ Ibid.

⁵⁰ Ibid.

other regions, improved air quality in the Coachella Valley will be partly dependent upon reduced ozone emissions in the South Coast Air Basin.

Carbon Monoxide (CO) is a colorless, odorless gas emitted by automobiles and other motor vehicles. In high concentrations, carbon monoxide can contribute to the development of heart disease, anemia, impaired psychological behavior, and reduction in birth weight.⁵¹

Nitrogen Dioxide (NO₂) is a byproduct of fuel combustion which acts as an irritant. Because it absorbs blue light, high concentrations of nitrogen dioxide leave a brownish-red haze in the atmosphere, thereby reducing visibility. Short-term exposure to nitrogen dioxide can result in airway contraction in healthy individuals, and diminished lung capacity in individuals with asthma or chronic obstructive pulmonary disease.

Sulfur Dioxide is a colorless, pungent, extremely irritating gas which results from the combustion of high-sulfur content fuels, such as coal and oil. Short-term exposure to sulfur dioxide can result in airway constriction and severe breathing difficulties in asthmatics. High levels of exposure can cause fluid accumulation in the lungs and lung tissue damage.⁵²

Lead (Pb) occurs in the atmosphere as particulate matter resulting from leaded gasoline and the manufacturing of batteries, paint, ink and ammunition. The elimination of leaded gasolines in recent years has reduced the hazards associated with airborne lead. Exposure to lead can result in anemia, kidney disease, gastrointestinal dysfunction and seizures. In severe cases, neuromuscular and neurologic disorders can occur.⁵³

Particulate Matter (PM₁₀) consists of fine suspended particles of ten microns or smaller in diameter, which are byproducts of road dust, sand, diesel soot, wind storms and the abrasion of tires and brakes. PM₁₀ is one of the most prevalent forms of pollution in the Coachella Valley and is associated with strong desert winds, as discussed in more detail below. State and federal ambient air quality standards have been directed at reducing particulate matter of 10 microns or smaller. However, the U.S. EPA is currently recommending that new fine particulate standards be established to address particles 2.5 micrometers or smaller in size.

Fine particulate matter poses a significant threat to public health. The elderly, children and adults with pre-existing respiratory or cardiovascular disease are most susceptible to the effects of PM₁₀. Elevated PM₁₀ levels are associated with an increase in respiratory infections and occurrences of asthma attacks.

The process of natural sand migration, also known as “blowsand,” generates two types of PM₁₀ emissions: 1) natural PM₁₀ produced by direct particle erosion and fragmentation, and 2) secondary PM₁₀ in which sand is deposited on road surfaces, ground into smaller particles by motor vehicles, and resuspended in the air by those vehicles.

The Coachella Valley has a history of elevated PM₁₀ levels, which are closely associated with local fugitive dust emissions. In 1990, the South Coast Air Quality Management District adopted the

⁵¹ Ibid.

⁵² Ibid.

⁵³ Ibid.

“State Implementation Plan for PM10 for the Coachella Valley” (90-CVSIP) which outlined “reasonably available control measures” for PM10, and established a future attainment date for areas previously unable to meet federal PM10 standards.

In January 1993, the Coachella Valley was reclassified from a “moderate” to “serious” non-attainment area for PM10 by the U.S. EPA.⁵⁴ The Coachella Valley Association of Governments (CVAG) and its member cities have worked closely with one another to implement the measures set forth in the 90-CVSIP, including the adoption of city-based dust control ordinances, street cleaning programs, and the use of chemical stabilizers, site watering techniques and landscape treatments designed to reduce fugitive dust.

Recent monitoring data indicate that, with few exceptions, the Coachella Valley has attained the federal PM10 air quality standard and is eligible for reconsideration by the U.S. EPA as having attained this standard. In 1996, the SCAQMD prepared and submitted to the EPA the “Coachella Valley PM10 Attainment Redesignation Request and Maintenance Plan,” which requested reconsideration and included a maintenance plan designed to help the region achieve attainment for a 10-year period.⁵⁵ The Valley was required to demonstrate that it could meet federal PM10 emission standards for three consecutive years; this time period expired in 1999. The EPA was expected to issue its opinion on attainment status during the year 2000, but has not as of this writing.⁵⁶

State and Federal Air Quality Standards

State and federal ambient air standards for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and suspended particulate matter are shown in Table III-17. State standards are generally more restrictive than federal standards.

⁵⁴ “Coachella Valley PM10 Attainment Redesignation Request and Maintenance Plan,” prepared by the South Coast Air Quality Management District, September 1996.

⁵⁵ Ibid.

⁵⁶ Aurora Kerr, Coachella Valley Association of Governments, May 18, 2000.

**Table III-17
State and Federal Ambient Air Quality Standards**

<u>Pollutant</u>	<u>State Standards</u>		<u>Federal Standards</u>	
	Averaging Time	Concentration	Averaging Time	Concentration
Ozone	1 hour	0.09 ppm	1 hour	0.12 ppm
Carbon Monoxide	1 hour	20.0 ppm	1 hour	35 ppm
	8 hours	9.0 ppm	8 hours	9.0 ppm
Nitrogen Dioxide	1 hour	0.25 ppm	annually	0.053 ppm
Sulfur Dioxide	1 hour	0.25 ppm	annually	0.03 ppm
	24 hours	0.04 ppm	24 hours	0.14 ppm
Suspended Particulate Matter	24 hours	50 $\mu\text{g}/\text{m}^3$	24 hours	150 $\mu\text{g}/\text{m}^3$
	AGM	30 $\mu\text{g}/\text{m}^3$	AAM	50 $\mu\text{g}/\text{m}^3$

Notes: ppm = parts per million

AGM = Annual Geometric Mean

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter of air

AAM = Annual Arithmetic Mean

Source: "1997 Air Quality Management Plan," prepared by South Coast Air Quality Management District.

Pollutants of Regional Concern

Of the pollutants described above, ozone and PM10 are the most prevalent in the Coachella Valley and the City of La Quinta. There are a number of circumstances that are unique to the Coachella Valley which make it difficult to satisfy the requirements of the Clean Air Act. Air pollution in the Coachella Valley is the result of a variety of regional activities, including grading and construction, automobile traffic, and the operation of furnaces and other heating, cooling and ventilation equipment. However, a substantial amount of the pollution in the Coachella Valley can be attributed to regional geographic and climatic conditions. As discussed previously, air quality monitoring data indicate that federal ozone standard exceedances in the Coachella Valley are largely the result of pollutant transport from the upwind South Coast Air Basin (SCAB). The continued implementation of control strategies in the SCAB is expected to contribute to future attainment of the federal ozone standard in the Coachella Valley.

The valley's elevated PM10 levels are strongly related to local fugitive dust problems. The valley is a low-lying desert basin characterized by low annual rainfall and low humidity. The valley is surrounded on the north, west and south by mountain ranges that physically isolate it from coastal influences. Temperatures can exceed 120°F during summer months. As daily temperatures rise, cooler coastal air is drawn through the narrow San Geronio Pass to the west, generating strong winds that cross the most active erosion zones in the valley. Large quantities of desert sand and dust are transported through the valley, reducing visibility, damaging property and threatening public health.

Air Quality Monitoring Stations

The South Coast Air Quality Management District operates and maintains regional air quality monitoring stations at numerous locations throughout its jurisdiction. The City of La Quinta is located within Source Receptor Area (SRA) 30, which includes monitoring stations in Palm Springs and Indio.

Table III-18 shows the maximum concentrations of PM₁₀, and the number of days exceeding state and federal standards in the Coachella Valley between 1989 and 1998. Ozone levels at the Palm Springs and Indio air quality monitoring stations for the same period are illustrated in Table III-16.

Table III-18
Coachella Valley Air Quality Trends
Exceedances of Suspended Particulate Matter (PM₁₀) Standards

Monitoring Station	Year	Max. Concentration ug/m ³ /24 hours	Days (%) Standard Exceeded Federal ¹	State ²
Palm Springs	1989	292	2 (3.3%)	17 (28.3%)
	1990	83	0 (0.0%)	9 (15.3%)
	1991	197	1 (1.8%)	14 (25.0%)
	1992	175	1 (1.7%)	4 (6.7%)
	1993	58	0 (0.0%)	1 (1.7%)
	1994 ³	97	0 (0.0%)	23 (38.3%)
	1995 ³	199*	1 (1.6%)*	27 (44.3%)*
	1996	130	0 (0.0%)	2 (3.3%)
	1997	63	0 (0.0%)	1 (1.8%)
	1998	72	0 (0.0%)	3 (5.2%)
Indio	1989	712	4 (6.9%)	39 (67.2%)
	1990	520	4 (6.8%)	41 (69.5%)
	1991	340	3 (5.1%)	37 (62.7%)
	1992	117	0 (0.0%)	18 (30.5%)
	1993	125	0 (0.0%)	25 (41.0%)
	1994 ³	97	0 (0.0%)	23 (38.3%)
	1995 ³	199*	1 (1.6%)	27 (44.3%)
	1996	117*	0 (0.0%)	29 (50.0%)
	1997	144*	0 (0.0%)	23 (42.6%)*
	1998	114	0 (0.0%)	32 (40.0%)

¹ >150 ug/m³ in 24 hour period

² > 50 ug/m³ in 24 hour period

³ Includes high-wind natural event days.

* Less than 12 full months of data; may not be representative.

Source: Annual air quality site monitoring reports, prepared by South Coast Air Quality Management District.

Table III-19
Coachella Valley Air Quality Trends
Exceedances of Ozone Standards

Monitoring Station	Year	Max. Concentration in 1 Hour	No. Days Standard Exceeded Federal ¹	State ²
Palm Springs	1989	.19 ppm	37	108
	1990	.17 ppm	27	73
	1991	.18 ppm	22	72
	1992	.15 ppm	21	69
	1993	.17 ppm	20	79
	1994 ³	.17 ppm	13	71
	1995 ³	.16 ppm	9	49
	1996	.16 ppm	12	60
	1997*	.16 ppm*	4*	45*
	1998	.17 ppm	8	40
Indio	1989	.16 ppm	16	76
	1990	.16 ppm	10	47
	1991	.18 ppm	13	48
	1992	.14 ppm	8	45
	1993	.16 ppm	3	25
	1994 ³	.17 ppm	13	71
	1995 ³	.16 ppm	9	49
	1996	.12 ppm	0	26
	1997	.11 ppm	0	3
	1998	.13 ppm	2	16

¹ >.12 parts per million in 1 hour

² >.10 parts per million in 1 hour prior to 1989, >.09 ppm beginning 1989

³ Palm Springs and Indio ozone levels represented as a single Coachella Valley data value in SCAQMD annual report. Values recorded are the highest recorded at either station.

* Less than 12 full months of data; may not be representative.

Source: Annual air quality site monitoring reports, prepared by South Coast Air Quality Management District.

2. Project Impacts

Implementation of the proposed General Plan can be expected to result in an increased potential for air quality degradation in the City of La Quinta and the Coachella Valley. Pollutants will come from a variety of sources, with the most significant impacts associated with emissions from vehicular traffic. Another potentially significant source of pollutants will be site disturbance, grading and construction activity. Other sources include the consumption of natural gas and the use of electricity by residents and businesses in the planning area. The following discussion describes the major sources of air pollutants associated with buildout of the proposed General Plan. Projected emissions are quantified where possible.

Fugitive Dust

Fugitive dust is typically generated during the disturbance and grading of undeveloped acreage and the construction of new facilities. Depending on soil characteristics, the number of acres disturbed, climatic conditions and other factors, the amount of fugitive dust generated can be significant.

It is beyond the scope of this study to accurately quantify the potential impacts of fugitive dust associated with General Plan buildout, as these will depend upon site-specific characteristics and grading/construction plans of future development projects. Nonetheless, the following factor can be applied to provide a general estimate of future, long-term fugitive dust emissions.

**Table III-20
Calculations of Fugitive Dust Potential**

Total Area to be Disturbed at Buildout*	Factor	Total Potential Dust Generation
24,881 acres	26.4 lbs./day/acre	656,858 lbs./day

* Includes vacant acres remaining to be developed through buildout of the Draft General Plan. Does not include vacant Open Space acreage.

Source: Table A9-9, "CEQA Air Quality Handbook," prepared by South Coast Air Quality Management District, April 1993.

The above estimate represents total emissions to be generated during buildout of the proposed General Plan, and provides a benchmark by which the potential impacts of future development in the planning area can be measured. These emissions will be produced over the life of the General Plan, and are not representative of short-term, project-specific impacts.

Stationary Source Emissions

Calculations of stationary source emissions include emissions from electrical power plants (located outside the City of La Quinta) and the consumption of natural gas for cooking, heating and related activities. Power plant emissions consist primarily of combustion products, such as carbon monoxide, oxides of nitrogen, sulfur oxides, particulate matter and reactive organic gases (ROG).

Table III-21 shows potential power plant emissions associated with annual electricity consumption by residential development upon buildout of the proposed General Plan. The amount of electrical energy and natural gas required to power lights, appliances and other equipment is based on per unit usage factors provided by the South Coast Air Quality Management District (SCAQMD) in the SCAQMD EIR Handbook.⁵⁷ These figures are then multiplied by SCAQMD pollutant emission generation factors.

Table III-21
Power Plant Emission Projections
for Residential Development at Project Buildout (Lbs. per 1000 kwh)

Annual Electric Energy Usage (per unit)		Total Number of Dwelling Units		Total Annual Electric Usage	
5,626.50 kwh/unit/year		x	78,952 units	444,223,428 kwh	
Pollutant	Carbon Monoxide	Nitrogen Oxides	Sulfur Oxides	Particulates	Reactive Organic Gases
Factor	444,223 x 0.20	444,223 x 1.15	444,223 x 0.12	444,223 x 0.04	444,223 x 0.01
Lbs./Year	88,844.7	510,856.9	53,306.8	17,768.9	4,442.2

Source: CEQA Air Quality Handbook, prepared by South Coast Air Quality Management District, April 1993. Appendix to Chapter 9, Tables A9-11-A and A9-11-B. Assumes continued availability and use of natural gas in power plants and an average contribution from hydro-electric sources. Represents total pounds emitted per year at buildout.

Emissions tables for commercial and industrial land uses are generated in the same manner, except different annual usage factors are applied. The electrical power factors are given on a per square foot basis, rather than a per unit basis, and the SCAQMD Handbook separates commercial and industrial uses by type.

The commercial uses selected for this analysis include the "retail," "restaurant," "office," "food store," and "hotel/motel" categories provided in the SCAQMD Handbook. It is assumed that retail uses will compose approximately 69% of all commercial development at buildout, restaurants will compose about 4%, offices 11%, food stores 8%, and hotels/motels 8%.

⁵⁷ Table A9-11-A, "CEQA Air Quality Handbook," prepared by the South Coast Air Quality Management District, April 1993.

Table III-22
Power Plant Emission Projections
for Commercial Development at Buildout (Lbs. per 1000 kwh)

Estimated Total Annual Electric Usage: 339,348,828 kwh/year*

Pollutant	Carbon Monoxide	Nitrogen Oxides	Sulfur Oxides	Particulates	Reactive Organic Gases
Factor	339,349 x 0.20	339,349 x 1.15	339,349 x 0.12	339,349 x 0.04	339,349 x 0.01
Lbs./Year	67,869.8	390,251.2	40,721.9	13,574.0	3,393.5

* Usage factor based on the following breakdown of commercial square footage, kwh/square foot usage and emission factors: Retail - 13,204,979 square feet @ 13.55 kwh/sq. ft.; Restaurant - 765,506 sq. ft. @ 47.45 kwh/sq. ft.; Office - 2,105,142 sq. ft. @ 12.95 kwh/sq. ft.; Food Store - 1,531,012 sq. ft. @ 53.50 kwh/sq. ft.; Hotel/Motel - 1,531,012 sq. ft. @ 9.95 kwh/sq. ft., as provided in Appendix A9-11-A of the CEQA Air Quality Handbook, April 1993.

Source: CEQA Air Quality Handbook, prepared by South Coast Air Quality Management District, April 1993. Appendix to Chapter 9, Tables A9-11-A and A9-11-B. Assumes continued availability and use of natural gas in power plants and an average contribution from hydro-electric sources. Represents total pounds emitted per year by all commercial development at buildout.

The industrial uses which will occur in the planning area at General Plan buildout are best described as "warehouse" and "miscellaneous" in the CEQA Handbook. For the purposes of this analysis, it is assumed that warehouse development will account for approximately 25% of all industrial development at General Plan buildout, and the remaining 75% can be considered as "miscellaneous" industrial development. Projected industrial-related emissions from power plants are illustrated in the following table.

Table III-23
Power Plant Emission Projections
for Industrial Development at Buildout (Lbs. per 1000 kwh)

Estimated Total Annual Electric Usage: 258,441,297 kwh/year*

Pollutant	Carbon Monoxide	Nitrogen Oxides	Sulfur Oxides	Particulates	Reactive Organic Gases
Factor	258,441 x 0.20	258,441 x 1.15	258,441 x 0.12	258,441 x 0.04	258,441 x 0.01
Lbs./Year	51,688.3	297,207.5	31,013.0	10,337.7	2,584.4

* Usage factor based on the following breakdown of commercial square footage, kwh/square foot usage and emission factors: Warehouse - 7,208,962 sq. ft. @ 4.35 kwh/sq. ft.; Miscellaneous - 21,626,887 sq. ft. @ 10.50 kwh/sq. ft., as provided in Appendix A9-11-A of the CEQA Air Quality Handbook, April 1993.
Source: CEQA Air Quality Handbook, prepared by South Coast Air Quality Management District, April 1993. Appendix to Chapter 9, Tables A9-11-A and A9-11-B. Assumes continued availability and use of natural gas in power plants and an average contribution from hydro-electric sources. Represents total pounds emitted per year by all commercial development at buildout.

The following three tables provide projections of emissions associated with natural gas consumption at General Plan buildout. These emissions are based on average monthly consumption factors established by The Gas Company, formerly Southern California Gas Company, and applied by the SCAQMD. The same pollutants which were projected for power plant emissions in the tables above are calculated for natural gas emissions. As with power plant emissions, consumption factors vary with the type of land use.

Table III-24
Emissions Associated with Natural Gas Consumption
for Residential Development at Buildout (Lbs. per 10⁶ Cu. Ft.)

Single Family DUs = 6,665.0 cf/unit/mo	x	73,976 du	=493,050,040 cf/mo		
Multi-Family DUs = 4,011.5 cf/unit/mo	x	4,976 du	= 19,961,224 cf/mo		
		TOTAL	= 513,011,264 cf/mo		

Pollutant	Carbon Monoxide	Nitrogen Oxides	Sulfur Oxides	Particulates	Reactive Organic Gases
Factor	513 x 20.0	513 x 80.0	513 negligible	513 x 0.20	513 x 5.3
Lbs./Month	10,260.2	41,040.9	negligible	102.6	2,719

Source: CEQA Air Quality Handbook, prepared by South Coast Air Quality Management District, April 1993. Tables A9-12-A and A9-12-B, Appendix to Chapter 9.

Table III-25
Emissions Associated with Natural Gas Consumption
for Commercial Development at Buildout (Lbs. per 10⁶ Cu. Ft.)

Estimated Total Monthly Natural Gas Usage: 56,513,483 cf/mo*

Pollutant	Carbon Monoxide	Nitrogen Oxides	Sulfur Oxides	Particulates	Reactive Organic Gases
Factor	56.5 x 20.0	56.5 x 120.0	56.5 negligible	56.5 x 0.20	56.5 x 5.3
Lbs./Month	1,130.3	6,781.6	negligible	11.3	299.5

* Usage factor based on the following breakdown of commercial square footage, cf/sq. ft./month and emission factors: Retail - 15,501,497 sq. ft. @ 2.9 cf/sq. ft./month (includes retail, restaurant and food store land uses); Office - 2,105,142 sq. ft. @ 2.0 cf/sq. ft./month; and Hotel/Motel - 1,531,012 sq. ft. @ 4.8 cf/sq. ft./month, as provided in Appendix A9-12-A and A9-12-B of the CEQA Air Quality Handbook, 1993.

Source: CEQA Air Quality Handbook, prepared by South Coast Air Quality Management District, April 1993.

Table III-26
Emissions Associated with Natural Gas Consumption
for Industrial Development at Buildout (Lbs. per 10⁶ Cu. Ft.)

Estimated Total Monthly Natural Gas Usage: 138,412,075 cf/mo*

Pollutant	Carbon Monoxide	Nitrogen Oxides	Sulfur Oxides	Particulates	Reactive Organic Gases
Factor	138.4 x 20.0	138.4 x 120.0	138.4 negligible	138.4 x 0.20	138.4 x 5.3
Lbs./Month	2,768.2	16,609.4	negligible	27.7	733.6

* Usage factor based on the following breakdown of commercial square footage, cf/sq. ft./month and emission factors: Industrial - 28,835,849 sq. ft. @ 4.8 cf/sq. ft./month (highest commercial usage factor), as provided in Appendix A9-12-A and A9-12-B of the CEQA Air Quality Handbook, 1993.

Source: CEQA Air Quality Handbook, prepared by South Coast Air Quality Management District, April 1993.

Moving Emissions

A comprehensive traffic impact analysis was prepared by RKJK & Associates to evaluate the potential traffic and circulation impacts associated with buildout of the proposed General Plan (see Appendix F). According to the traffic study, buildout of the planning area is expected to result in approximately 1,200,150 vehicle trips per day.

Moving emissions associated with project buildout are shown in Table III-27. Total vehicle emissions are calculated using emissions factors provided by the California Air Resources Board EMFAC7G Model, in which emissions are projected to Year 2005. Actual per mile emissions over subsequent years can be expected to be reduced as combustion technology improves and reduces vehicle emissions.

Table III-27
Moving Exhaust Emission Projections at Buildout (pounds/day)

Total Vehicle Trips/Day		Ave. Trip Length (miles)		Total Miles/Day		
1,200,150		x	3	=	3,600,450	
Pollutant	ROG	CO	NO	PM10 Exhaust	PM10 Tire Wear	PM10 Brake Wear
Pounds at 50 mph	715.32	18,598.35	3,815.05	-	79.48	79.48

Based on California Air Resources Board's EMFAC7G Model. Assumes Year 2005 summertime running conditions at 75°F, light duty autos, catalytic.

Summary of Impacts

The following table summarizes the potential generation and emission of pollutants associated with buildout of the planning area, including those from power plants, the consumption of natural gas and vehicular emissions.

Table III-28
Anticipated Cumulative Daily Project-Related Emissions
Associated with Buildout of the Proposed General Plan (lbs./day)

	Stationary Source Emissions		Moving Source Emissions	Threshold Criteria*	
	Power Plants	Natural Gas Consumption	Vehicles at 50mph	Total Pounds Per day	Total Pounds Per Day
Carbon Monoxide	570.9	471.9	18,598.4	19,640.2	550.00
Nitrogen Oxides	3,283.0	2,183.6	3,815.1	9,281.7	100.00
Sulfur Oxide	342.4	n/a	n/a	342.4	150.00
Particulates	114.2	4.7	158.96	277.86	150.00
ROGs	28.6	125.1	715.3	869.0	75.00

* Threshold criteria offered by the South Coast Air Quality Management District for assistance in determining the significance of air quality impacts. Source: "CEQA Air Quality Handbook," prepared by South Coast Air Quality Management District, April 1993.

The table above summarizes the worst-case projected emissions associated with buildout of the proposed General Plan. As shown in the table, threshold criteria for all pollutants are expected to be exceeded. However, these emissions are expected to be adequately mitigated through the implementation measures described below.

The impacts anticipated from buildout of the proposed General Plan will constitute an incremental increase in the air pollutants affecting the Coachella Valley and the City of La Quinta. Given that most of the City's electrical power is generated in air basins outside the Coachella Valley, projects occurring within the City limits will also contribute to cumulative air quality impacts in other regions.

It is important to note that the emissions described in the table above will be spread over the long-term life of the General Plan, and will not be emitted during a single quarter or in any short-term or concentrated manner. It is expected that future vehicle emissions will become more efficient in the future, as new combustion technologies are introduced. However, the impact of new technologies is difficult to anticipate, and even projected future rates of emissions for vehicular traffic cannot be considered definitive.

Proposed Annexation No. 12 and Sphere of Influence Amendment

The proposed annexation and sphere of influence areas are not expected to result in significant air quality impacts in the near-term. Although several development projects, including the Coral Mountain and Kohl Ranch Specific Plan areas, have been approved in these areas, no significant development is expected to occur in the annexation or SOI areas in the immediate future.

Nonetheless, future development has the potential to adversely impact local and regional air quality over the long term. Land use incompatibilities may arise where urban and agricultural lands are adjacent to one another. Fugitive dust generated by disking, plowing, and other agricultural operations could create a nuisance for neighboring development, and fugitive dust generated during the grading and construction phases of new development could adversely impact neighboring farmlands. The City must assure that all parties are in compliance with applicable air quality standards and procedures, as well as the mitigation measures described below.

Fugitive Dust Emissions

The proposed annexation area includes approximately 1,260 vacant acres, and 2,700 acres which are currently in agriculture. About 174 of these acres will not involve significant development, grading or land disturbance, as they are designated for Open Space, Golf Course Open Space, and Park Facilities. Upon annexation, the remaining 1,086 vacant acres and much of the agricultural acreage could be developed, and depending on site-specific soil characteristics, acreage, development plans, climatic conditions, and the use of dust suppression techniques, they have the potential to generate large quantities of fugitive dust.

The sphere of influence area contains approximately 1,315 acres of vacant land, and 5,011 acres currently in agriculture. Should the SOI amendment area be annexed into the City in the future, about 148 of these acres would be designated as Open Space and would not be available for development. The remaining 1,167 acres of vacant land and those lands in agriculture would be designated for urban uses and could potentially be developed.

The South Coast Air Quality Management District estimates that the disturbance of one acre of land results in the generation of 26.4 pounds of dust per day. With 1,086 vacant acres and 2,700 acres in agriculture, that could potentially be disturbed by future development, buildout of the annexation area could generate an estimated 99,950 pounds of fugitive dust per day. Applying this factor to the 6,178 developable acres in the SOI area yields a total dust generation potential of approximately 163,099 pounds per day. Altogether, the annexation area and SOI could generate 263,049 pounds of fugitive dust. This is a cumulative estimate, which represents emissions generated by all development projects during the entire buildout process. Actual emissions will be spread over the long-term, on a project-specific basis, and can be expected to be spread over many decades.

Cumulative Daily Project-Related Emissions

Buildout of the annexation area will also result in the generation of power plant emissions, emissions associated with the consumption of natural gas, and moving exhaust emissions from motor vehicle trips. The impacts are included in the tables above, and will not be in excess of those numbers shown in Table III-8. The annexation area and SOI represent 40% of the General Plan's residential development potential, and 23.5% of the General Plan's commercial development potential. These two areas can therefore be expected to generate proportional air emissions as they develop. Given the exceedances in daily thresholds shown in Table III-28, and that buildout of the annexation area and SOI will occur over the long term, it can be expected that buildout of these areas will cumulatively impact air quality, and exceed daily thresholds. These emissions, however, will be spread throughout the buildout process, as new development occurs.

Without mitigation, buildout of the General Plan, Annexation No. 12 and the Sphere of Influence Amendment will result in significant impacts associated with air quality. As previously stated, advances in technology, and the refinement of pollution control devices, are expected to improve over time. When combined with the mitigation measures below, the impacts of air pollution can be reduced to an acceptable level.

3. Mitigation Measures

The South Coast Air Quality Management District is responsible for coordinating with the City of La Quinta and CVAG to monitor regional pollutant levels and regulate air pollution sources. However, air quality management is an ongoing process, and the City must play an active role in determining how to mitigate development activities which have the potential to negatively impact local and regional air quality.

A variety of mitigation measures can be employed throughout the life of the Draft General Plan to reduce project-related pollutant emissions. The implementation and updating of California Title 24 Building Codes, and the more efficient use of energy in general, can be expected to reduce the impacts of pollutant emissions from power plants and the consumption of natural gas. Alternative methods of electrical power generation have and will continue to replace the need for additional fossil fuel-based generating capacity.

It is safe to presume that improved efficiency in combustion technology and overall reductions in air pollutants can be expected in the future. The State of California has implemented mandatory smog checks for automobiles, which are intended to help assure compliance with existing emissions standards. Cleaner fuels and more efficient automobiles are expected to continue to evolve.

Nonetheless, a number of actions can be taken to further reduce the various long-term operational impacts on air quality. The mitigation measures listed below will most likely be required for all future development projects in the planning area.

- A. The City shall participate, through CVAG and SCAQMD, in the monitoring of all pollutants of regional concern, and shall maintain records of regional air quality trends.
- B. Development and grading permits shall be reviewed and conditioned to require the provision of all available methods of assuring minimal pollutant emissions from the proposed project. The Community Development Department shall review grading plan applications to assure compliance with mitigation measures set forth in this EIR, as well as those otherwise conditioned by the City.
- C. The Land Use Element of the General Plan shall be developed and routinely updated to locate air pollution point sources, such as industrial facilities, away from residential areas and other sensitive receptors.
- D. Wherever practical, particularly in major project planning, buffer zones shall be provided between sensitive receptors and point source emitters such as highways, hazardous material locations and industrial sources.

- E. The City shall encourage the phasing and staging of development projects to assure the lowest construction-related pollutant emission levels practical, and shall require the use of water trucks, temporary irrigation systems and other measures which will limit fugitive dust emissions during site disturbance and construction.
- F. The City shall initiate and encourage the use of alternative, clean energy sources for transportation, heating and cooling. Pilot studies and/or demonstration programs shall be initiated in order to promote these uses.
- G. The City shall strive to maintain a balance between housing, commercial and industrial growth, and shall encourage mixed use development within the planning area to reduce the length of vehicle trips and associated moving vehicle emissions.
- H. The City shall promote the development of pedestrian-oriented retail centers, community-wide trails and dedicated bike lands to encourage alternatives to motor vehicle travel. These components shall be integrated and periodically updated in the General Plan Circulation Element.
- I. The City shall pursue programs that reduce construction and operations related emissions by regulating development and creating a diversified transportation system which minimizes vehicle miles traveled and reduces the impact of motor vehicles on local air quality.
- J. The City shall conduct an initial study for all projects which exceed any of the SCAQMD pollutant emission threshold criteria, and shall require detailed air quality analyses for all applications which have the potential to adversely affect air quality.
- K. Participate in the continued development and coordination of mass transit services linking residential, shopping, resort and commercial centers of the City, and coordinate with CVAG, Southern California Association of Governments, and the Sunline Transit Agency to improve and optimize regional transportation services.
- L. The City shall review individual projects under CEQA utilizing the control efficiencies provided on pages 11-13 through 11-32 of the 1993 SCAQMD CEQA Handbook to determine the effectiveness of proposed air quality mitigation measures.
- M. Support the implementation of the air quality control measures identified in the Coachella Valley PM10 State Implementation Plan.
- N. Encourage developers to adopt ride-share, vanpool, flex-time and telecommuter programs to reduce peak hour vehicular traffic.
- O. A PM10 Management Plan for construction operations shall be submitted with all development proposals. The plan shall include dust management controls such as:
 - water site and equipment morning and evening
 - spread soil binders on site, unpaved roads, and parking areas
 - re-establish ground cover on construction site through seeding and watering
 - pave construction roads, where appropriate
 - operate street-sweepers on paved roads adjacent to site

- P. To reduce construction-related traffic congestion, developers and contractors shall:
- configure construction parking to minimize traffic disturbance
 - minimize obstruction of through-traffic lands
 - provide a flag person to ensure safety at construction sites, as necessary
 - schedule operations affecting roadways for off-peak traffic hours
 - provide rideshare incentives to construction personnel
- Q. To minimize construction equipment emissions, developers shall:
- wash off trucks leaving the site
 - require trucks to maintain two feet of freeboard
 - properly tune and maintain construction equipment
 - use low sulfur fuel for construction equipment
- R. To minimize indirect-source emission, developers may:
- implement energy conservation measures beyond state and local requirements
 - install low-polluting, high-efficiency appliances
 - install solar pool and water heaters, where feasible
 - landscape with appropriate drought-tolerant species to reduce water consumption
 - and provide passive solar benefits
 - install energy efficient street lighting
- S. To minimize building energy requirements, developers shall implement the following:
- improve the thermal integrity of buildings
 - utilize window glazing, wall insulation, and efficient ventilation methods
 - introduce efficient heating and other appliances, such as water heaters, cooking equipment, refrigerators, furnaces and boiler units
 - incorporate appropriate passive solar design and solar heaters
 - use devices that minimize the combustion of fossil fuels

Mitigation Monitoring/Reporting Program

- A. The Community Development Department shall continue to coordinate with CVAG and the South Coast Air Quality Management District to facilitate the maintenance and expansion of the Coachella Valley's existing air quality monitoring equipment.
Responsible Parties: Community Development Department, CVAG, SCAQMD
- B. The appropriate code enforcement division shall record, consolidate and retain all complaints it receives regarding air quality degradation from vehicle emissions, industrial generators and other sources of air quality impacts. A report on air quality complaints and identified problems shall be provided in the annual review of the General Plan. In addition, development may be temporarily halted until inadequate controls or unacceptable conditions are corrected to the satisfaction of the City and/or SCAQMD.
Responsible Parties: Community Development Department, CVAG, SCAQMD

J. Noise

The following discussion is largely based upon the findings and recommendations identified in a comprehensive acoustical analysis prepared by RKJK & Associates for the La Quinta General Plan Update. The study evaluates the existing noise environment in the planning area and projects the future noise impacts associated with General Plan buildout. It is included in its entirety in Appendix E of this document.

1. Existing Conditions

The evaluation of noise levels within a community is important to protecting the health and welfare of the general public, and can help define the need for remedial measures for existing noise problems and those associated with future development. Noise has long been accepted as a part of the urbanization process, and is generated by construction equipment, motor vehicles, air and rail traffic, mechanical equipment, household appliances and numerous other sources. Excessive noise can contribute to both temporary and permanent physical impairments, as well as stress, annoyance and other psychological reactions.

The existing noise environment in the City of La Quinta can be characterized as relatively quiet, with the majority of noise being generated by motor vehicle traffic on highways and major arterials. Rail traffic along the Southern Pacific corridor also constitutes an occasional, but less intrusive element to the noise environment, as does air traffic associated with the Bermuda Dunes and Desert Resorts Airports.

Noise Rating Systems

Noise is most commonly measured with the A-weighted decibel (dBA), which is defined as a measurement of the noise energy received while monitoring a noise source. The quiet rustling of leaves, which is barely audible, typically registers at 10 dBA. A normal conversation at 5 feet typically measures 55 dBA, while the sound of a jet aircraft taking off at 200 feet registers at about 125 dBA.

A number of noise rating scales are used in California to evaluate land use compatibility. The equivalent sound, or Leq scale, represents the average constant noise level over a given period of time, and is the basis for the Ldn and CNEL scales. The Ldn value represents a summation of hourly Leq's over a period of 24 hours, and includes a weighting factor or penalty for noise occurring in the nighttime period of 10:00 p.m. and 7:00 a.m. The Community Noise Equivalent Level (CNEL) represents a 24-hour average noise level which includes a 5 dBA penalty for noises occurring during the evening time period (from 7 p.m. to 10 p.m.) and a 10 dBA penalty for noises occurring during the nighttime period (from 10 p.m. to 7 a.m.).

Motor Vehicle Noise

The noise generated by motor vehicles is the primary source of noise in La Quinta. The level of noise generated by automobiles, trucks, buses and motorcycles varies according to traffic volumes, the mix of vehicle types, and the traffic speed. Adjacent to City roadways, the noise environment in

the City and planning area currently ranges from 49.8 to 69.5 dBA CNEL at a distance of 100 feet from the centerline.

Noise monitoring conducted for this General Plan focussed on vehicular noise levels adjacent to City roadways. The following listing describes each of the monitoring sites. The Table below enumerates the location and the monitored noise level. Exhibit III-27 graphically displays these locations.

General Plan Monitoring Sites

Measurements were taken at eleven locations with the updating of the General Plan. Sites included major transportation corridors, land use transition areas, sensitive receptors and residential neighborhoods. Monitoring was conducted during the daytime hours, in July and September of 1999. Each of the sites monitored is briefly described below.

- 1.) Country Club Drive and Starlight Lane:** This site was located 100 feet south of Country Club, and 100 feet east of Starlight Lane. The noise monitor was located in a vacant parcel, near a residential neighborhood, south of the Interstate 10/Railroad corridor, and east of the Bermuda Dunes Airport.
- 2.) Fred Waring and Jefferson:** Monitoring was conducted 100 feet north and west of the intersection.
- 3.) Washington St./La Quinta del Oro:** This monitoring was conducted 50 feet east of the Washington Street centerline, across from the Indian Wells Tennis Stadium. The noise measurement was taken immediately west of the existing wall at La Quinta del Oro.
- 4.) Highway 111 and Dune Palms Road:** Monitoring was conducted 100 feet south of the Highway 111 centerline, east of the auto mall and west of Dune Palms Road.
- 5.) Washington Street and Avenue 50:** Monitoring was conducted on the northeast corner of Washington and Avenue 50, 100 feet from the centerline of each street.
- 6.) Truman Elementary School:** Monitoring was done 100 feet from the centerline of Avenue 50, between the Truman Elementary School and the Boys and Girls Club.
- 7.) South End of Cove:** Monitoring at this site occurred at 52565 Eisenhower, 100 feet from the centerline of Eisenhower, between Calle Nogales and Calle Chihuahua.
- 8.) Avenue 52 and Jefferson Street:** Monitoring was conducted 100 feet from the centerline of both Avenue 52 and Jefferson Street, at the southeast corner.
- 9.) Westside School:** This monitoring was conducted in front of Westside School, 50 feet south of Airport Boulevard.

10.) Coachella Valley Union High School: This monitoring was conducted across the street from the High School, 50 feet from the centerline of Airport Boulevard near Van Buren.

11.) Highway 111/Thermal: This monitoring was conducted at the southwest corner of Highway 111 and Church Street, east of the Thermal Airport.

Table III-29
Noise Monitoring at Selected Sites
Locations and CNEL Values

Location	Estimated CNEL
1). Country Club Drive and Starlight Lane	65.5
2). Fred Waring and Jefferson	63.3
3). Washington St./La Quinta del Oro	74.2
4). Highway 111 and Dune Palms Road	66.5
5). Washington Street and Avenue 50	69.3
6). Truman Elementary School	68.4
7). South End of Cove	61.3
8). Avenue 52 and Jefferson Street	67.4
9). Westside School	62.3
10.) Coachella Valley Union High School	62.5
11.) Highway 111/Thermal	69.6

Source: RKJK & Associates



TERRA NOVA®
Planning & Research, Inc.

**City of La Quinta
General Plan
Noise Monitoring Sites**



Exhibit

III-27

The Interstate 10/Railroad Corridor

The Bermuda Dunes portion of the planning area is bordered on the north by the Interstate 10/Union Pacific Railroad Corridor. The Thermal planning area is also bordered by the railroad tracks, which turn southeasterly in the City of Indio. Noise from the corridor currently impacts these areas, and will continue to do so. Noise is generated by the high volume of vehicles on I-10 traveling at a high rate of speed, and the passage of trains on the rail lines. The noise generated by trains is considerable, but is of short duration and only periodic.

Aircraft Noise

Aircraft noises impacting the Planning Area occurs at both the Bermuda Dunes and Desert Resorts (Thermal) airports. The Bermuda Dunes airport currently handles 25,332 aircraft operations, and has a direct impact on the northern portion of the City and Planning Area.

Plans to expand the 17-35 runway at the Thermal Airport will have an impact on the eastern Planning Area. These plans were studied for the Thermal Airport Environmental Impact Report, and Year 2010 noise contours were developed.

Mechanical and Industrial Noise

In addition to noise generated by vehicular traffic and aircraft, there are other noise generators within the City, which could create significant noise related conflicts. Industrial operations can create substantial noise problems. Loading and transfer areas, outdoor warehousing operations and other unscreened operations will also raise issues of impact and compatibility. Rail transfer operations in the northern and eastern portions of the Planning Area can also be expected to be potentially significant noise generators.

Another source of potentially significant noise is from the operation of commercial mechanical equipment, including chillers, refrigeration units and heating/air conditioner equipment associated with commercial centers. Noise from roof-mounted equipment can penetrate into adjacent neighborhoods and impact sensitive receptors. The constant hum associated with fans and compressors can substantially impact outdoor activities and adversely affect the quality of life.

Noise Standards and Regulations

The Federal Highway Program Manual Vol. 7, Ch. 7, Section 3, 1982 provides a land use compatibility chart for community noise. "Normally acceptable" noise limits are 50 to 60 db for residential land uses (single and multi family dwellings, group quarters, and mobile homes), and 50 to 65 db for commercial lands uses. Noise levels up to 70 db are considered "conditionally acceptable" for residential, transient lodging, schools, libraries and commercial uses. However, noise exposure up to only 65 db is considered "conditionally acceptable" for recreational uses.

The California Department of Health Services also provides guidelines for establishing compatible land uses and limiting human exposure to noise.⁵⁸ The recommended "normally acceptable" noise limit is 60 dB for residential land uses (including single family dwellings, duplexes, and mobile homes) and 65 dB for multi-family residential dwellings and transient lodging. Noise levels

⁵⁸ California Department of Health Services, "Guidelines for the Preparation and Content of the Noise Element in the General Plan," 1990.

up to 70 dB are “normally acceptable” for commercial land uses. Noise levels up to 70 dB are considered “conditionally acceptable” for residential, lodging, schools, libraries, churches, and hospitals.

Other agencies, including the U.S. Department of Housing and Urban Development and U.S. Environmental Protection Agency have also developed maximum noise level standards and recommendations. The California Administrative Code includes noise insulation standards for new multi-family structures within the 60 CNEL contour adjacent to roads, railroads, airports, industrial areas, and rapid transit lines. Acoustic analysis is required to demonstrate that these multi-family units are designed to limit interior noise levels, with doors and windows closed, to 45 CNEL in any habitable room.

2. Project Impacts

A computerized noise model was prepared to evaluate the impacts of land use patterns, traffic and development on the noise environment. As noted above, existing conditions were monitored throughout the City and planning area. The table below provides existing and projected General Plan buildout conditions at specific locations and along major roadway segments.

Table III-30
Projected General Plan Buildout Noise Contours Adjacent to City Roadways

Roadway	Distance to Contours (FT) ¹					
	2000 Condition			Buildout		
	70 dBA	65 dBA	60 dBA	70 dBA	65 dBA	60 dBA
Washington Street						
North of Avenue 42	63	135	291	106	228	491
South of Avenue 44	56	122	262	126	271	585
South of Highway 111	92	199	428	165	356	766
North of Avenue 50	59	126	272	107	230	494
North of Avenue 52	50	108	283	86	185	399
Jefferson Street						
North of Highway 111	37	79	171	78	169	364
South of Avenue 48	39	84	180	39	84	180
Madison Street						
North of Avenue 52	5	10	21	67	143	309
South of Avenue 54	--	--	--	94	202	436
Harrison Street						
South of Airport Boulevard	--	--	--	108	233	501
South of Avenue 60	--	--	--	90	195	420
SR - 111						
South of Avenue 60	--	--	--	55	119	257
Avenue 44						
West of Jefferson	--	--	--	71	153	330
Highway 111						
West of Jefferson	--	--	--	100	216	465
Avenue 48						
West of Jefferson	--	--	--	78	168	362
Avenue 50						
West of Jefferson	28	61	131	65	140	302
East of Jefferson	23	51	109	58	124	267
Avenue 52						
West of Jefferson	30	64	139	74	159	342
East of Madison	17	37	80	62	134	290
West of Van Buren	--	--	--	56	121	260
Airport Boulevard						
East of Madison	--	--	--	52	111	240
West of Van Buren	--	--	--	68	147	316
West of SR-111	--	--	--	79	170	365
Avenue 60						
West of Filmore	--	--	--	33	71	153

¹. All distances are measured from centerline. R/W means the contour falls within the right-of-way.

Source: RKJK & Associates

Traffic Noise Impacts

Noise impacts are expected to be primarily generated by increasing traffic volumes as the City proceeds to build out. The La Quinta Traffic Model was used to determine the future volumes projected on major roadways. The average posted speed limits and a percentage mix of light and heavy truck traffic along the roadways are included in the modeling data, as supplied by the City, CVAG, and traffic counts prepared for the General Plan Traffic Study.

The noise analysis found that the Recommended Alternative of the General Plan will result in unmitigated noise levels ranging from 61.3 to 73.3 dBA CNEL at 100 feet from centerline in the City and planning area. Depending on the adjacent land use, mitigation measures will be required to reduce the noise levels to an acceptable level. The General Plan includes a policy which requires that the City adhere to the noise standards established in Community Noise and Land Use Compatibility, Table 6.1 of the Master Environmental Assessment. This noise standards allows a standard of 65 dBA CNEL for exterior noise levels adjacent to sensitive receptors such as residences, hospitals and convalescent homes.

Other Noise Impacts

Noise impacts associated with buildout of the General Plan are likely to also include construction noise, stationary source noise, noise from recreational areas, and noise from other sources. The ongoing review of development proposals as they arise will ensure that the City is able to track and mitigate impacts as they occur. Project-specific site design can substantially reduce noise impacts below those projected, and therefore the estimates shown above are considered to be conservative. A wide range of design options, including roadway engineering, spacing of intersections, parkway widths, berms and walls can be included in future projects to mitigate noise impacts.

Railroad Corridor

Growth in the number of train trips was estimated by SCAG staff for the post-2020 time period. The estimated 42 trains expected to use the rail line post-2020 will generate a CNEL of 75.1 dBA at a distance of 100 feet from the tracks without mitigation.

Aircraft Operations

The Bermuda Dunes airport is expected to increase its annual operations from the current 25,332 to 26,852 annually, resulting in only a small increase in existing noise levels. The resulting noise contours are depicted in Exhibit III-28.

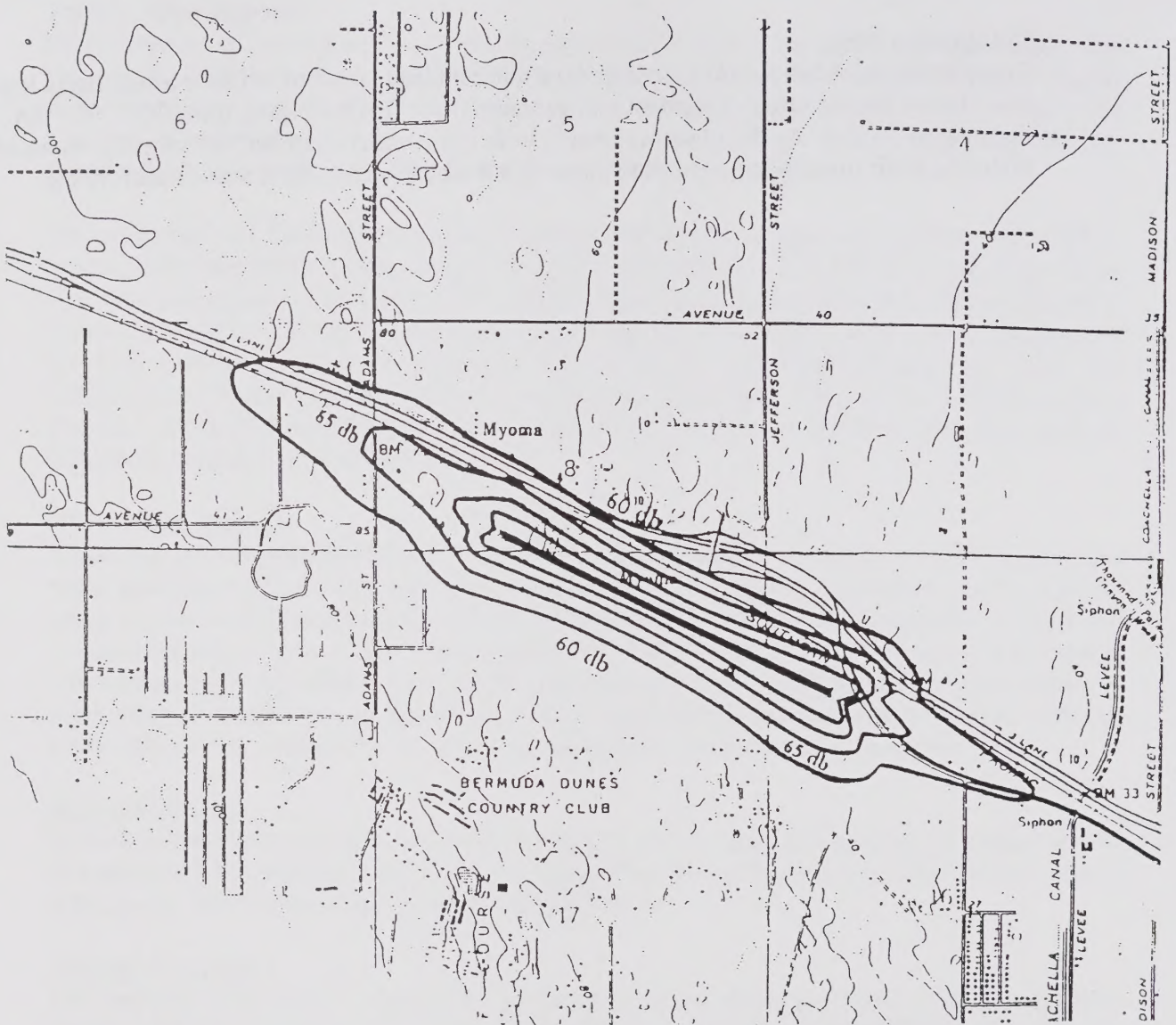
The planned expansion of the Thermal Airport will have an impact on the eastern Planning Area. These impacts are expected north and south of the runways, in areas planned for industrial development in the Land Use Element. Exhibit III-29 depicts the noise contours for this airport.

Commercial and Industrial Noise

The noise generated by commercial and industrial activities will have its most significant impact on adjacent sensitive receptors. The review of commercial and industrial projects to assure that land use compatibility is maintained will be critical as the General Plan is built out. Substantial progress has been made in noise analysis and mitigation through careful equipment design and ever improving baffling and noise cancellation technologies.

Construction Noise

Construction noise has a short term impact on adjacent land uses, but can have a significant impact since heavy construction equipment can generate noise levels ranging from 70 to 95 dBA at a distance of 50 feet. As the planning area is built out, construction activity must be included in project-specific mitigation measures to maintain a reasonable noise level both on and off site.



Scale 1:2000

SOURCE: BERMUDA DUNES AIRPORT NOISE STUDY
PREPARED BY AVIATION SYSTEMS
ASSOCIATES, INC. ON FEBRUARY 7, 1996.



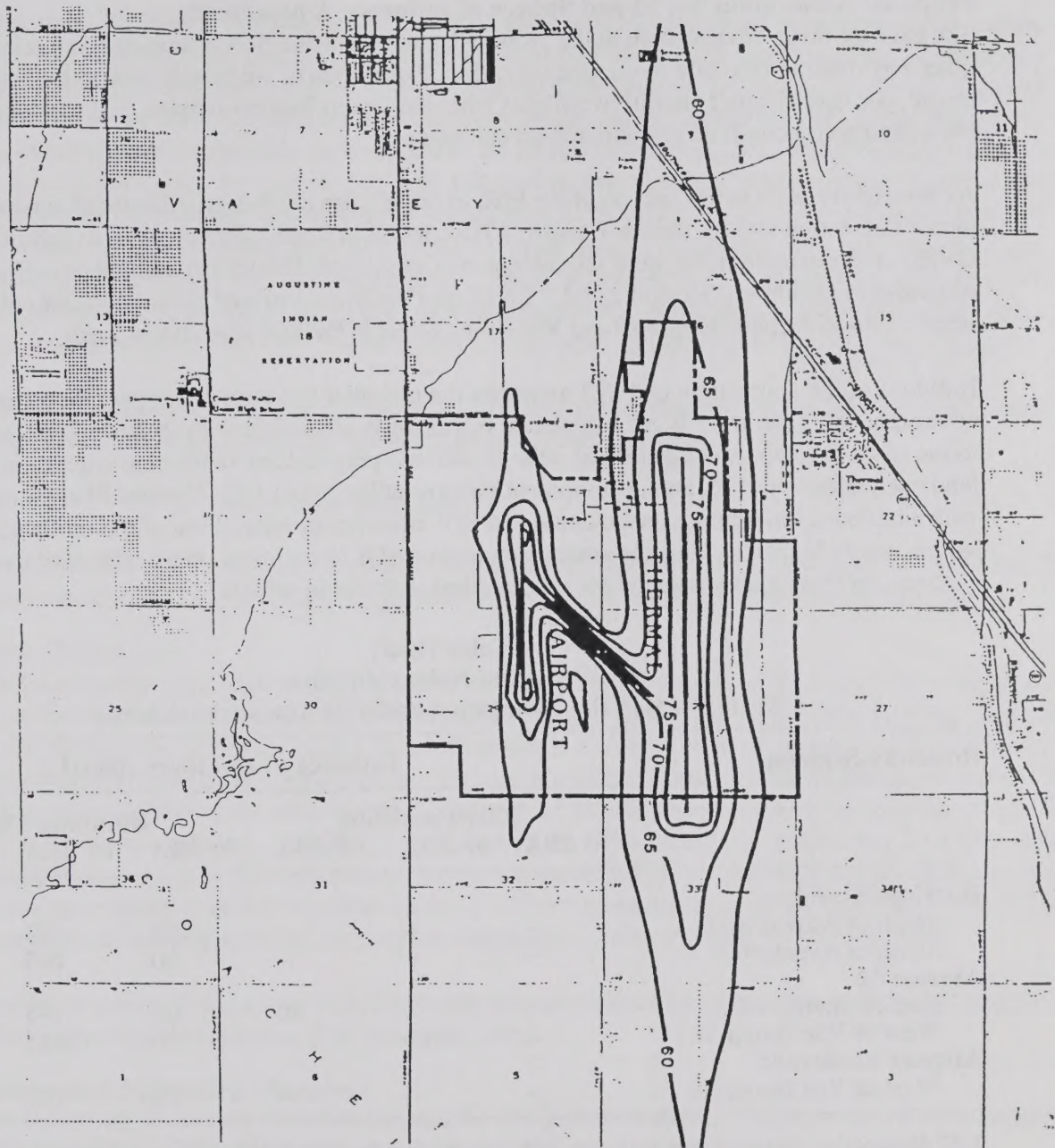
TERRA NOVA[®]
Planning & Research, Inc.

**City of La Quinta
General Plan
Bermuda Dunes Airport
Noise Contours**



Exhibit

III-28



SOURCE: THERMAL AIRPORT EIR PREPARED FOR
THE RIVERSIDE COUNTY ECONOMIC
DEVELOPMENT AGENCY



TERRA NOVA®

Planning & Research, Inc.

**City of La Quinta
General Plan
Thermal Airport Noise Contours**



Exhibit

III-29

Proposed Annexation No. 12 and Sphere of Influence Amendment

The existing noise environment in the proposed annexation and SOI amendment areas is relatively quiet and characteristic of a rural, agrarian region. Noise sources are largely limited to motor vehicle traffic, occasional small aircraft overflights from the Desert Resorts Airport, and mechanical noise associated with household and agricultural equipment.

As described earlier in this section of the EIR, existing noise levels were monitored at two locations in the annexation and SOI areas. Existing CNEL levels at these locations were as follows: 1) 62.3 CNEL at Westside School, near the intersection of Airport Boulevard and Monroe Street in the proposed annexation area, and 2) 62.5 CNEL at Coachella Valley Union High School, near the intersection of Airport Boulevard and Van Buren Street in the SOI amendment area.

Buildout of the annexation and SOI areas has the potential to adversely impact the existing noise environment. Noise impacts are expected to be primarily associated with increasing traffic volumes as the areas develop. A computerized noise model was prepared to evaluate the impacts of proposed land use patterns, traffic, and development patterns at buildout of the General Plan planning area, which includes the proposed annexation and SOI amendment areas. Five of the modeled roadway segments are located within the annexation and/or SOI amendment areas. The anticipated noise contours on these roadway segments are described in the table below.

**Table III-31
Projected Noise Contours
At Buildout of the Annexation and SOI Amendment Areas**

Roadway Segment	Distance to Contours (feet) ¹					
	2000 Condition			Buildout Condition		
	70 dBA	65 dBA	60 dBA	70 dBA	65 dBA	60 dBA
Harrison Street						
South of Airport Blvd.	--	--	--	108	233	501
South of Avenue 60	--	--	--	90	195	420
Avenue 52						
East of Madison St.	17	37	80	62	134	290
West of Van Buren St.	--	--	--	56	121	260
Airport Boulevard						
West of Van Buren St.	--	--	--	68	147	316

¹ All distances are measured from centerline. R/W indicates that the contour falls within the right-of-way.
Source: RKJK & Associates (see Appendix E of this document).

The data in the table above represent unmitigated noise levels at 100 feet from the roadway centerline. The average posted speed limits and percentage mix of light and heavy truck traffic along these roadways was provided by CVAG and traffic counts prepared for the General Plan traffic study. Depending on adjacent land uses, mitigation measures will be required to reduce noise levels on some streets to acceptable levels.

Other noise sources in the annexation and SOI areas will include temporary construction noise, stationary source noise, and noise from recreational and other areas. Development immediately south of the Desert Resorts Airport will be impacted by occasional aircraft noise, and the planned expansion of the 17-35 runway will have an even greater impact on surrounding lands. Year 2010 airport noise contours are illustrated in Exhibit III-29 and indicate that land between Tyler and Polk Streets, as far south as Avenue 64, will fall within the 60 dBA noise contour. Some lands immediately south of the airport will fall within the 65, 70, and 75 dBA noise contours. Proposed land uses in this area are largely limited to open space, industrial, and commercial uses. Nonetheless, site-specific design features, which mitigate noise impacts, may need to be implemented. All noise associated with new development in the annexation and SOI amendment areas will be subject to the City's noise ordinance and other mitigation measures described below.

Without mitigation, buildout of the General Plan, Annexation No. 12 and the Sphere of Influence Amendment will result in significant impacts associated with noise.

3. Mitigation Measures

There are a variety of strategies available for preserving the City's noise environment, including: land use planning, transportation planning, project design mitigation, simple and acoustical barriers.

Noise Ordinance

The City has adopted noise standards in Section 9.100.210 of its Municipal Code. The ordinance also provides regulations for noise measurement/monitoring and cites special provisions of and exceptions to the ordinance. Violation of the Noise Ordinance are defined as a nuisance and subject to the procedures, remedies and penalties set forth in the City's Nuisance Abatement Ordinance. The Ordinance established an exterior noise standard of 60 dBA CNEL for residential land uses. The General Plan proposes to amend this standard to 65 dBA CNEL, in conformance with accepted standards in California. The noise standards in the General Plan are intended to guide the location of future noise generators and sensitive land uses. The implementation of the new standard will allow greater flexibility in project planning, and is considered a positive impact.

In order to ensure that impacts associated with noise are reduced to a less than significant level, the following mitigation measures shall be implemented:

Categorical Mitigation Measures

The following discussion describes the specific mitigation measures, which are stated on a categorical basis to address identified impacts.

Construction Noise

- A. All construction equipment operating in the planning area shall be fitted with well maintained functional mufflers to limit noise emissions.
- B. To the greatest extent feasible, earth moving and hauling routes shall be located away from nearby existing residences.

- C. Any portion of development in the planning area involving blasting or pile driving operations shall have a focused acoustical study conducted, to establish the level and duration of off-site noise and vibration impacts and appropriate mitigation measures.

On-Site Stationary Noise Sources

- D. The design, selection and placement of the mechanical equipment for various buildings within the planning area shall include consideration of the potential noise impact on nearby residences, both within any development and in the surrounding community.
- E. Silencers and/or barriers shall be provided where necessary at outdoor equipment, such as cooling towers, air cooled condensers and refrigeration compressors/condenser units, and at the air intake and discharge openings for building ventilation systems.
- F. Appropriate sound barriers shall be provided surrounding any and all public facilities capable of generating disturbing levels of noise, such as water pumping stations.

Off-Site Traffic Noise

- G. Potential noise impacts shall be considered in the final site plans for all proposed projects within the planning area. Factors to be considered shall include the strategic arrangement of housing to provide necessary shielding of outdoor living areas and the incorporation of additional setbacks from roadways or construction of additional noise barriers.
- H. During the preparation of construction drawings for project-specific development, the exact acoustical specifications for window glass in buildings with unshielded first floor windows and second floor windows shall be determined.
- I. Project designs shall be required to include measures which assure that interior noise levels for residential development do not to exceed 45 CNEL, as required by Title 25 (California Noise Insulation Standards).
- J. Design of specific projects of all development types, shall include and meet State Code requirements for unit-to-unit airborne sound isolation, both laterally and vertically, and for vertical impact sound isolation in multi-family residential and hotel construction.
- K. All commercial and industrial projects which are to be located adjacent to residential land uses or land use designations shall be required to prepare a noise impact analysis which assesses the potential impacts of the project, and provides for adequate mitigation measures to assure that the City standards for residential land uses is maintained.
- L. The City shall encourage a City-wide circulation pattern which places primary traffic loads on major arterials and preserves local neighborhood noise environments by limiting roadways to local traffic to the greatest extent practical.

Mitigation Monitoring/Reporting Program

Pre-Construction

- A. During project-specific site planning and building design, ensure acoustical analysis takes into account:
- selection and placement of mechanical equipment for all buildings,
 - shielding & buffering of mechanical equipment for all buildings,
 - strategic location of attached residences to provide for shielding of outdoor living areas,
 - theme wall is constructed to noise barrier specifications,
 - mechanical ventilation and cooling are provided in all units which experience out door noise levels above CNEL 65, in order to maintain interior noise levels below CNEL 45,
 - Designate acceptable truck/construction equipment route(s), as appropriate,
 - Construction drawings shall include exact acoustical specifications for window glass in buildings with unshielded first and second floor windows which experience noise exposures above CNEL 65 and,
 - verify that design plans of specific projects within the planning area comply with State Code requirements of unit-to-unit airborne sound isolation

Responsible parties: Developer, general contractor and Building and Safety Department.

During Construction

- B. Ensure functional mufflers on all construction equipment.
Responsible parties: Developer, general contractor and Building Department.
- C. Ensure that designated truck routes are being utilized.
Responsible parties: General and grading contractors, Building Department.
- D. Ensure construction equipment operates during the hours set in the Noise Ordinance, except in emergencies.
Responsible parties: General contractor and the City Building Department.
- E. In areas subject to potentially significant noise impacts, the City shall require new development to monitor and document compliance with all applicable noise level limits.
Responsible Agency: Community Development Department
- F. Periodically review land use patterns and the community noise environment, and amend the Land Use map as appropriate to assure reasonable land use/noise compatibility.
Responsible Agency: Community Development Department; Planning Commission; City Council
- G. Designate acceptable truck/construction equipment route(s), as appropriate.
Responsible parties: City of Building and Community Development Departments.

K. Visual Impacts

1. Existing Conditions

Regional Setting

The Coachella Valley and City of La Quinta are located in a region characterized by exceptional mountain and open space views. The low desert basin in which they occur has been created by seismic activity, which has raised the surrounding terrain to form the San Jacinto, Santa Rosa, San Bernardino and Little San Bernardino Mountain Ranges. Mount San Jacinto, which rises to 10,804 feet, and Mount San Gorgonio which occurs at an elevation of 11,502 feet, are the area's two highest peaks and dominate the north end of the Valley. Large and smaller scale alluvial fans, and sandy/rocky washes emanate from the mountains. The valley floor is largely composed of sand dunes and fields, and extends to the Salton Sea at an elevation of about 228 feet below sea level.

The San Bernardino Mountains form the northwesterly edge of the Coachella Valley, and occur more than fifteen miles from the La Quinta planning area. This more distant range trends roughly east-west and is often snow-covered in winter months. While the highest peaks of this range are visible from the northern portion of the planning area, they occur at some distance from La Quinta and do not have an immediate impact on the City's viewsheds.

The Little San Bernardino Mountains form the northerly boundary of the Coachella Valley, and lie approximately ten miles north of the planning area. Although this range reaches lower elevations than other ranges in the region, it provides a sense of scale to the valley floor and exhibits a rich display of textures and colors in late afternoon. This range is generally visible from the planning area, although views may be blocked by development and vegetation.

The north-south trending San Jacinto Mountains comprise the southwesterly boundary of the Coachella Valley. This fault-controlled mountain range occurs approximately fifteen miles west of La Quinta, creating the steepest gradient in North America. Numerous peaks rise to about 9,000 feet and offer dramatic scenery from the valley floor. This range does not directly impact viewsheds within the City, given its distance from the planning area and its partial obstruction by the intervening Santa Rosa Mountains.

The Coachella Valley and City of La Quinta are bounded on the south by the Santa Rosa Mountains. The highest peaks in this range include Toro Peak, which rises to 8,717 feet, and Santa Rosa Peak at 8,000 feet. Other highly visible peaks include Haystack Mountain at 3,808 feet, Asbestos Mountain at 5,265 feet, and Martinez Mountain at 6,548 feet. State Highway 111 generally follows the base of the Santa Rosas, which provide a striking backdrop to the built environment on the valley floor. This range and its role in the La Quinta area are discussed in more detail below.

The Indio Hills are located approximately five miles north of the planning area, and south of the Little San Bernardino Mountains. Edom Hill rises to an elevation of 1,614 feet. Limited portions of this roughly east-west trending range are visible from the Bermuda Dunes area. However, the Indio Hills are upgradient from the planning area, and views may be obstructed by existing development and wind rows along the Union Pacific rail corridor.

Local Setting

Within the planning area, elevations range from a low of about 190 feet below sea level in the southeastern portion of the planning area, to a high of about 1,600 feet above sea level at the peak of the Coral Reef Mountains. The Santa Rosa Mountains form the westerly boundary of the City, with the Coral Reef Mountains extending north to Avenue 52 to form the easterly edge of the Cove. The City's hillside terrain consists of steep, rocky slopes which provide unique, dramatic viewsheds within the planning area. The proximity of the mountains to development on the low-lying valley floor contributes to the high sensitivity of the City's visual resources. The Santa Rosa and Coral Reef Mountains are of particular value to the Cove community, which is bounded by the mountains on the immediate west, south and east.

The northerly portion of the planning area is characterized by low-lying sand dunes and fields. Given that this area is largely developed, it exhibits rather low visual sensitivity other than views of the Santa Rosa Mountains to the south, and distant views of the Indio Hills and Little San Bernardino Mountains to the north.

The eastern portion of the planning area consists of flat terrain, which slopes gently to the southeast. Much of this area has been developed or is in active cultivation. Views from developed areas are generally limited by buildings, block walls and other structures within the built environment. Agricultural lands can be considered moderately sensitive visual resources, as they preserve a sense of open space and provide a clear line of sight to surrounding terrain. Although surrounding viewsheds may be obstructed by dense date palm groves, these groves symbolize the agricultural heritage of the planning area, provide relief from the low-lying, sparsely vegetated valley floor, and can constitute a valuable visual resource in and of themselves.

2. Project Impacts

Implementation of the proposed General Plan is expected to result in the continued development of a variety of residential, commercial and limited industrial structures, as well as golf courses and other resort developments. With the exception of hotels/motels and other specialty structures, development facilitated by the Plan is expected to continue to be limited to low and medium density, low elevation structures. A number of low density residential sites will be located within master planned communities and will benefit from consolidated open space, consistent architectural themes, and limited building heights.

Regardless of the type of development that occurs, new structures, signage, parking lots, utility infrastructure, lights and other elements of the built environment will result in additional visual impacts which could adversely affect surrounding viewsheds, either partially or wholly. Continued urbanization in undeveloped areas will change the topography and appearance of the valley floor from sandy substrate and alluvial fans with natural desert vegetation to a man-made built environment. New development, particularly that which occurs in the eastern portion of the planning area where development is limited and agricultural lands predominate, will create increased light and glare resulting from residential, commercial and industrial activities. Increased traffic will generate additional headlights and lighting levels on local roadways.

The proposed General Plan addresses these potential impacts through a series of policies and programs that are directed at maintaining the City's character, including its agricultural, historical and resort residential elements, as well as the scenic value of the surrounding mountains. The Plan either directly regulates development, or mandates the development of zoning and other regulatory codes that assure detailed City staff review and discretionary approval of building heights and other design features.

Although the precise location of future development cannot be definitively established at this time, current trends indicate that a substantial amount of urbanization may be concentrated in the south-central portion of the planning area. Continued development in this area and lands further east could remove agricultural lands from cultivation, or indirectly impact remaining agricultural lands which provide a sense of open space and serve as an important link to the City's agricultural past. Under the proposed General Plan, lands in this area are generally designated for low density residential development with an agricultural overlay that reinforces the City's commitment to maintaining existing agricultural land uses. Agricultural lands within the overlay area shall be allowed to continue until such time as the owner chooses to develop.

The proposed General Plan Land Use Plan designates the slopes of the Santa Rosa and Coral Reef Mountains as Open Space with a Hillside Overlay. These designations effectively restrict development and allow for only discretionary approval of trails, trailheads and similar features. The Plan also calls for the continued implementation of the City's Hillside Conservation Zone Ordinance, which prohibits development on steep slopes. These measures will limit development to the valley floor and preserve the high visual quality of the Santa Rosa and Coral Reef Mountains.

Proposed Annexation No. 12 and Sphere of Influence Amendment

The annexation and SOI amendment areas are comprised of generally flat terrain, which slopes gently to the southeast. Much of the area is in active cultivation, although a moderate degree of development has occurred, including low and medium-density residential, golf course, commercial, and light industrial projects. The steep, rocky slopes of the Coral Reef Mountains are immediately adjacent to the southwestern corner of the annexation area, near the intersection of Avenue 60 and Madison Street, and are visible from elsewhere in the annexation and SOI areas. Date palm groves and other agricultural lands provide visual relief from the low-lying, sparsely vegetated valley floor, enhance the sense of open space in the region, and represent the region's agricultural heritage.

Buildout of the annexation and SOI amendment areas is expected to have an adverse impact on the visual and aesthetic resources of the area. In particular, the potential conversion of agricultural lands to very low and low-density residential development will transform the rural flavor of the area to that of a developed urban community. Existing viewsheds may be obstructed by buildings and other structures, and the existing sense of open space will be diminished. Elements of the built environment, including signage, utility infrastructure, and paved surfaces are also expected to contribute to the overall degradation of existing visual resources. Other impacts may include increased light and glare associated with household lighting, vehicle headlights, streetlights, illuminated signage, building materials and architectural coatings.

These potential impacts are not expected to affect the annexation and SOI areas in the immediate future, but will occur gradually, as new development takes place. It is unclear whether, and to what extent the conversion of agricultural lands to urban uses will occur. Nonetheless, over the long-term, continued development in this portion of the valley could constitute a significant impact to valuable scenic resources.

The proposed land use plans for the annexation and SOI areas have been designed to maintain consistency with existing General Plan designations, and to minimize potential visual and other environmental impacts. Aside from the mixed-use development approved for the Kohl Ranch and Coral Mountain Specific Plan areas, future development is largely restricted to very low and low-density residential development, at maximum densities of 2 units per acre and 4 units per acre, respectively. All development will be restricted to low elevation structures, similar in character to the development which currently occurs in the City. An agricultural overlay has been applied to nearly all these lands to allow existing agricultural activities to continue at the discretion of the landowner. Approximately 8% of the SOI area has been dedicated to Open Space, and about 11% of the annexation area has been designated for Open Space, Park Facilities, and Golf Course Open Space. Development within master planned communities, such as the Coral Mountain and Kohl Ranch Specific Plans, will include consolidated open space. These planning mechanisms will help minimize, but will not prevent, potential visual impacts from occurring in the annexation and SOI areas. The mitigation measures provided below will also help minimize potential visual impacts.

Without mitigation, buildout of the General Plan, Annexation No. 12 and the Sphere of Influence Amendment will result in significant impacts associated with visual impacts.

3. Mitigation Measures

The proposed General Plan enhances the City's ability to regulate and prevent significant viewshed impacts from occurring as a result of future development, while also mandating continued protection of the City's visual resources. In order to ensure that impacts associated with visual impacts are reduced to a less than significant level, the following mitigation measures shall be implemented:

- A. New development shall incorporate landscape designs and materials that complement the native desert environment.
- B. Overhead utility lines shall be undergrounded to the greatest extent possible through the establishment of an undergrounding program and guidelines.
- C. The City shall coordinate with utility providers, including but not limited to the Imperial Irrigation District, The Gas Company, and GTE California to assure that utility infrastructure, including water wells, substations, and switching/control facilities are effectively screened to preserve scenic viewsheds and limit visual clutter.

- D. Outdoor lighting shall be limited to the minimum height, number of fixtures, and intensity needed to provide sufficient security and identification in each development, making every reasonable effort to protect the community's night skies.
- E. Signage shall be limited to the locations, sizes, and maintenance requirements necessary to provide functional identification.
- F. The General Plan Land Use Map shall designate the Santa Rosa and Coral Reef Mountains as Open Space with a Hillside Overlay.
- G. Lands which are currently in cultivation shall be designated with an Agricultural Overlay in the General Plan Land Use Map, and shall be permitted to remain in agriculture until such time as the property owner decides to develop.
- H. Should agricultural lands be converted to urban land uses, elements of the past agricultural uses, such as date palm groves and citrus orchards, shall be incorporated into on-site open space areas, streetscapes and landscape designs.
- I. Commercial and mixed use development projects shall incorporate safe, convenient vehicular and pedestrian circulation, screened outdoor storage/loading and other unsightly areas, protected and enhanced outdoor seating areas, appropriate lighting levels, limited signage, and landscaping designs that preserve and enhance visual resources.
- J. Planning and design of residential neighborhoods and street corridors shall provide distinctive and characteristic design elements, such as entry monumentation and landscaping, which preserve and enhance the viewsheds enjoyed from these areas.
- K. Commercial and mixed use development shall be designed with particular attention to limiting the lighting impacts on adjacent residential neighborhoods.
- L. Development proposed along designated scenic highways, roadways and corridors shall be reviewed for compatibility with the natural and built environments to assure maximum viewshed protection and pedestrian and vehicular activity.
- M. All grading and development proposed within scenic viewsheds, including hillsides, shall be regulated to minimize adverse impacts to these viewsheds.
- N. The City shall establish and implement urban design development standards which protect scenic viewsheds and enhance community cohesion. Development standards shall address signage, landscaping, setbacks, building facades, vehicular and pedestrian access and related issues. The City shall assure that private and public sector development projects comply with these standards.

Mitigation Monitoring/Reporting Program

- A. The City shall maintain and amend a comprehensive Zoning Ordinance and other regulatory documents which define the design parameters to which public and private development projects must conform. Application packages shall be maintained to guide the preparation of Specific Plans, Conditional Use and other permits, and to assure a thorough review of all community design issues.

Responsible Parties: Community Development Department, Planning Commission, City Council.

- B. The Zoning Ordinance shall maintain design standards for multi-family developments, including Planned Residential Developments (PRDs), that assure a variety of design possibilities, the provision of safe and secure common open space, adequate parking and appropriate automobile storage, a comprehensive landscape program, perimeter walls and fencing where appropriate, and neighborhood-enhancing design.

Responsible Parties: Community Development Department, Planning Commission, City Council.

L. Public Services and Facilities

Schools

1. Existing Conditions

Residents from the City of La Quinta and the General Plan planning area are served by two public school districts: the Desert Sands Unified School District, and the Coachella Valley Unified School District. The Desert Sands Unified School District serves students living west of Jefferson Street and north of Avenue 48. The Coachella Valley Unified School District serves residents in the remaining planning area, which encompasses all lands east of Jefferson Street and south of Avenue 48.

Desert Sands Unified School District (DSUSD) currently operates a total of five schools within the General Plan planning area, including three elementary schools, one middle school and one high school. Each school's student enrollment figures for the 1999-2000 school year as well as the current maximum capacity are shown in the table below.

Table III-32
Total School Enrollment for
Desert Sands Unified School District Facilities, School Year 1999-2000

School Name	Grade Level	Current Enrollment	Max. Capacity
Adams Elementary	K-5	750	666
Monroe Elementary	K-5	658	578
Truman Elementary	K-5	1,036	970
La Quinta Middle	6-8	1,329	900
La Quinta High	9-12	2,027	1,868
TOTAL:		5,800	4,982

Source: Linda Lawson, Desert Sands Unified School District, personal Correspondence May 23, 2000.

The Coachella Valley Unified School District (CVUSD) operates five schools which serve students in the planning area, including two that serves students in kindergarten through eighth grade, one middle school ,and two high schools. Although two of the schools are located outside of the planning area, students residing in the planning area east of Jefferson utilize these facilities. Maximum capacity and total enrollment for the 1999-2000 school year are shown in Table III-33.

Table III-33
Total School Enrollment for
Coachella Valley Unified School District, School Year 1999-2000

School Name	Grade Level	Current Enrollment	Max Capacity
John Kelley School	K-8	1,020	792
Westside School	K-8	856	678
Cahuilla Desert Academy	7-8	917	990
Coachella Valley High	9-12	2,515	1,725
La Familia Continuation High	9-12	132	47
TOTAL:		5,440	4,232

Source: Elsa Esqueda, Coachella Valley Unified School District, Personal communication May 23, 2000.

Currently the school facilities in both school districts are operating over capacity, as shown in the tables above. DSUSD has about 818 more students than its targeted enrollment, while CVUSD has 1,208 more students, and currently relies on portable classrooms to provide additional space.

To help reduce overcrowding in elementary schools, CVUSD is currently constructing Mountain Vista Elementary located at the intersection of Hjorth Street and 49th Avenue in Indio . It is due to open in September 2000. CVUSD is also designing a large three school campus, which will have an elementary school, a middle school and a high school. The high school will serve approximately 2,200 students, the middle school will accommodate about 900 students, and the elementary school will serve about 732 students. The campus is still in the planning stages, but construction is expected to begin soon, and it will open by 2001 or 2002.

The Desert Sands Unified School District has no immediate plans to build new schools within the planning area, but two new schools will be constructed just outside the planning area in Indio. Dune Palms Elementary will serve approximately 700 students in kindergarten through fifth grade, and is scheduled to open in January 2000. Dune Palms Middle School will serve approximately 1,000 students in sixth through eighth grades, and is due to open in September 2001.

In 1986, the State Legislature approved AB 2926, which allows school districts to charge development fees for the construction and reconstruction of public schools. The current rates for statutory development fees are \$2.05 per square foot of residential development ,and \$0.35 per square foot of commercial development. The City of La Quinta supports the collection of statutory school impact fees to fund the construction of local schools.

There are several private schools in the Coachella Valley, including Christian School of the Desert, located in Bermuda Dunes. Regional colleges include College of the Desert Community College in Palm Desert, Chapman University in Palm Desert, and the University of California at Riverside.

2. Project Impacts

Buildout of the proposed General Plan is expected to result in the construction of approximately 66,811 dwelling units, 62,779 of which will be single-family home units, and 4,032 will be multi-family units. The table below shows an estimate of future school enrollment associated with buildout of the General Plan planning area.

Table III-34
Potential School Enrollment at General Plan Buildout

Grade Level	Potential Buildout Units	Student Generation Rate	Buildout Enrollment
K-5			
Single-Family	73,976	0.2167	16,031
Multi-Family	4,976	0.1321	657
6-8			
Single-Family	73,976	0.1012	7,486
Multi-Family	4,976	0.0474	236
9-12			
Single-Family	73,976	0.1176	8,700
Multi-Family	4,976	0.0318	158
TOTAL:			33,268

Based on Student Generation Rates, "Residential Development School Fee Justification Study for Coachella Valley and Desert Sands School District", June 26, 1998.

The table above assumes that development will occur at a moderate rate, and it uses both existing and potential new dwelling units as a method of calculating buildout enrollment.. While these estimates are useful for projecting future school enrollment, actual student enrollment figures could be more or less according to future levels of development as regulated by the General Plan. Regardless of the actual figures, the number of students generated by General Plan buildout could constitute a significant impact the public schools in the area, and both school districts need to plan accordingly. Desert Sands and Coachella Valley Unified School Districts utilize a funding system which receives fees from developers for school construction, and currently both have plans for providing additional school sites.

Proposed Annexation No. 12 and Sphere of Influence Amendment

The Coachella Valley Unified School District provides public education services and facilities to the proposed annexation and SOI amendment areas. Buildout of these areas will increase the student population and place additional demands on area schools. Anticipated school enrollment for the annexation and SOI areas are provided in the following tables.

Table III-35
Potential School Enrollment At Buildout of Annexation No. 12

Grade Level	Potential Buildout Units	Student Generation Rate	Buildout Enrollment
K-5			
Single-Family	10,912	0.2167	2,365
Multi-Family	1,313	0.1321	173
6-8			
Single-Family	10,912	0.1012	1,104
Multi-Family	1,313	0.0474	62
9-12			
Single-Family	10,912	0.1176	1,283
Multi-Family	1,313	0.0318	42
TOTAL:			5,029

Based on Student Generation Rates, "Residential Development School Fee Justification Study for Coachella Valley and Desert Sands School District," June 26, 1998.

Table III-36
Potential School Enrollment At Buildout of SOI Amendment Area

Grade Level	Potential Buildout Units	Student Generation Rate	Buildout Enrollment
K-5			
Single-Family	18,389	0.2167	3,985
Multi-Family	854	0.1321	113
6-8			
Single-Family	18,389	0.1012	1,861
Multi-Family	854	0.0474	40
9-12			
Single-Family	18,389	0.1176	2,163
Multi-Family	854	0.0318	27
TOTAL:			8,189

Based on Student Generation Rates, "Residential Development School Fee Justification Study for Coachella Valley and Desert Sands School District," June 26, 1998.

As shown in the tables above, buildout of the annexation and SOI amendment areas is expected to generate student populations of 5,029 and 8,189 students, respectively. These projections include students living in existing and future dwelling units, and are part of the projections shown in Table III-34, which estimates the student population at buildout of the entire General Plan. The number of students in the annexation and SOI areas will increase gradually, as new development occurs. These increases are not expected to result in significant impacts to CVUSD schools. The construction of CVUSD's new three-school campus, and the continued use of developer impact fees, are expected to minimize impacts to area schools.

Without mitigation, buildout of the General Plan, Annexation No. 12 and the Sphere of Influence Amendment will result in significant impacts associated with schools.

3. Mitigation Measures

In order to ensure that impacts associated with schools are reduced to a less than significant level, the following mitigation measures shall be implemented:

- A. Developers will continue to be assessed the statutory school mitigation fees for residential and commercial development.
- B. In the event that developers in the planning area attempt to utilize Mello-Roos or other types of public facilities financing districts, both school districts shall be included in discussions to determine whether funding streams may be used for school facilities. The Districts have the following alternatives available to mitigate significant impacts to area schools:

Leroy F. Greene State School Building Lease-Purchase Law - This act is an agreement between school districts and the state to provide for the construction, reconstruction, or replacement of school facilities by the State Allocation Board. First priority for future state funding will go to districts with 1) a substantial enrollment in year-round schools, 2) the ability to raise 50 percent of project costs, and 3) the opening of a new facility as a year-round school.

Lease-Purchase Arrangements - Many districts may enter into lease-purchase arrangements with private builders of portable classrooms (Section 39240 and 39290 of the State Education Code). This method can also be used to finance capital outlay. An additional advantage of lease-purchase agreements is that they offer the benefits of long-term debt financing without obtaining voter approval of special taxes or benefit assessments.

Mello-Roos Community Facilities Act - Provisions for this funding option are located in Government Code Section 55311 et. seq. A school district must initiate proceedings to declare itself a community facilities district to benefit from this Act. A community facilities district is defined as a governmental entity established to carry out specific activities within

specifically defined boundaries. Such a district may engage in the purchase, construction or rehabilitation of any real or tangible property with an estimated useful life of five years or longer.

Mitigation Monitoring/ Reporting Program

- A. The City of La Quinta will consult and cooperate with the Desert Sands and Coachella Valley Unified School Districts to continue to monitor public schools in the planning area, and to determine the extent of overcrowding, security issues, low performance on standardized tests, and other adverse impacts on area schools.

Responsible Parties: Community Development Department, City Council, Desert Sands Unified School District, Coachella Valley Unified School District

- B. The Desert Sands and Coachella Valley Unified School Districts will use their discretion in mitigating negative impacts to District schools.

Responsible Parties: Desert Sands Unified School District, Coachella Valley Unified School District, Community Development Department

Libraries

1. Existing Conditions

The La Quinta Public Library is located at 79-080 Calle Estado and is a branch of the Riverside County Library System. The library facility consists of 4,130 square feet and includes approximately 28,000 volumes. As an additional resource, the library currently has ten computers with internet access available for public use.

Residents of the planning area also use the Indio branch of the Riverside County Library System and the Palm Desert/College of the Desert Library.

The County strives to maintain an unadopted standard of 2 volumes and 0.5 square feet of library space per capita.⁵⁹ This standard is used to help establish the adequacy of public library facilities. Based on the County's standards, the library is under-served in the number of volumes by about 15,526 volumes, and in the amount of library space by approximately 6,752 square feet. The City has begun construction for a new 10,000 square foot library in the City Hall Building, however the City's current population will still be under-served in library space by approximately 882 square feet.

2. Project Impacts

Based on a projected General Plan buildout population of 207,970 residents and the County's unadopted standard described above, the planning area will require approximately 103,985 square feet of library space and an estimated 415,940 volumes at project buildout. These estimates are used for planning purposes, but the actual city population could be less or greater depending on future levels of development. Nonetheless, any significant increase in population would impact library services, and require new support items such as reading tables, staff assistance, and computers.

⁵⁹ Gary Christmas, Riverside County Librarian, personal communication March 20, 2000.

It is difficult to predict future library needs, especially as technological advances continue to develop. The County Library System will need to monitor library use and the provision of its services as the City grows in order to provide adequate service its residents.

Proposed Annexation No. 12 and Sphere of Influence Amendment

Buildout of the proposed annexation area and SOI are expected to result in a population of 86,537 residents. Applying a target ratio of 2 volumes and 0.5 square feet of library space per capita to the buildout population, the annexation area would be adequately served by a 43,269 square foot library facility with approximately 173,074 volumes.

The proposed annexation and SOI amendment are not expected to result in immediate impacts to City library services. Rather, impacts will occur gradually, as new development occurs. It is unclear whether, and to what extent urbanization will occur in this portion of the valley, and the City will need to monitor growth trends in the vicinity to assure the adequate provision of library services and personnel. This may include the construction of a new library facility in the annexation or SOI area in the future.

Without mitigation, buildout of the General Plan, Annexation No. 12 and the Sphere of Influence Amendment will result in significant impacts associated with libraries.

3. Mitigation Measures

In order to ensure that impacts associated with libraries are reduced to a less than significant level, the following mitigation measures shall be implemented:

- A. The City and County shall continue to monitor and assess the usage rate and level of services provided at the La Quinta Public Library to determine the need for additional services and facilities.
- B. The City will consult with Riverside County to determine appropriate mitigation fees necessary to provide adequate library services.
- C. The City will consider library needs when assessing developer impact fees in the eastern planning area, if these areas are annexed.

Mitigation Monitoring/Reporting Program

- A. The City and County shall monitor and determine utilization and needs of the library to continually provide adequate service to residents of the planning area..

Responsible Parties: City Manager, County Librarian

Police Protection

1. Existing Conditions⁶⁰

The City of La Quinta contracts with the Riverside County Sheriff's Department for law enforcement services within the City limits. The sheriff station that serves the City is located at 82-695 Doctor Carreon Boulevard in Indio. It provides residents with police protection 24 hours a day, seven days a week. Deputies currently have a five-minute response time throughout the City. There are three sheriff's units assigned to the City, and each consists of one to two deputies, depending on the time of day. A ratio of one police officer for every 1,000 residents is considered a desirable standard in many communities nationwide.

The Riverside County Sheriff's Department in Indio also provides police protection to residents within the extended planning area, outside of the City limits. All incidents and patrols occurring within this area are not covered under the City's contract, but are handled by County-beat cars.

2. Project Impacts

Implementation of the proposed General Plan may result in a total buildout population of approximately 207,970 residents. To maintain a target ratio of 1 deputy per 1,000 residents at General Plan buildout, the Riverside County Sheriff's Department will need a total of 208 deputies, which is an increase of 199 deputies than currently provided. This will require a significant increase in the number of deputies and level of police protection afforded to the residents of the City. An increase in the number of deputies, associated staff, equipment and patrol vehicles could result in substantial costs to the City. However, the demand for additional police protection services will increase gradually, and an increase in City revenue is also expected with General Plan buildout. Actual demand for police protection will be dependent upon future levels of development.

Proposed Annexation No. 12 and Sphere of Influence Amendment

Buildout of the proposed annexation area is expected to result in a total population of approximately 33,619 residents. To maintain a target ratio of one deputy per 1,000 residents, the City and County Sheriff's Department will need to dedicate a staff of 33 officers to the annexation area. The anticipated buildout population for the SOI amendment area is approximately 52,918 residents. To maintain an adequate level of police protection, about 53 officers will need to be assigned to the SOI area.

The actual demand for additional police protection services will depend upon future levels of development. Nonetheless, new development in the annexation and SOI amendment areas will place additional demands on the City and Sheriff's Department. The City will need to continually monitor growth trends in these areas to assure that adequate services are provided.

Without mitigation, buildout of the General Plan, Annexation No. 12 and the Sphere of Influence Amendment will result in significant impacts associated with police protection.

⁶⁰ Sgt. John Carlson, Administrative Sergeant, Riverside County Sheriff's Department, personal communication, May 20, 1999.

3. Mitigation Measures

In order to ensure that impacts associated with police protection are reduced to a less than significant level, the following mitigation measures shall be implemented:

- A. The Riverside County Sheriff's Department shall review new development proposals in order to evaluate project plans and the Department's ability to provide adequate police protection. This review should include, but not be limited to internal circulation, project directories, street names, and numbering systems. New developments shall comply with established Police Department standards.
- B. Provide increased security in residential, commercial, and industrial developments by promoting the utilization of crime prevention measures in project planning which results in "defensible space," or high security designs.
- C. The City shall continue to monitor City population and Sheriff's Department staffing levels to insure that sufficient levels of police protection are afforded.

Mitigation Monitoring/Reporting Program

- A. The Sheriff's Department shall monitor calls in the planning area. The City shall annually review response times and Sheriff Department activity to ensure adequate protection.
Responsible parties: Riverside County Sheriff's Department, City Manager.

Fire Protection

1. Existing Conditions⁶¹

Fire protection is provided to the City of La Quinta and its planning area by the Riverside County Fire Department. The Riverside County Fire Department is rated as Class 4 by the Insurance Service Office (ISO), a private company which rates fire departments throughout the country. The rating system is on a scale of 1 to 10, with Class 1 being the highest possible score. Rating of a fire station is based on a variety of safety standards, which include staffing levels, response times, building code standards, and staffing levels. The average response time for all of the City's stations is approximately 5 minutes. The staffing level requirement, as established by the County Board of Supervisors is two paid firefighters per station. All stations serving the planning area meet this standard. A total of seven fire stations with overlapping coverage areas serve the La Quinta General Plan planning area.

There is one fire station located within the City limits. Station 70 is located at the corner of 54th Avenue and Madison Street. It houses one fire engine, one brush engine and one rescue squad vehicle. The station is staffed by two paid firefighters and five volunteers.

⁶¹ Battalion Chief Doug McKain, Riverside County Fire Department, personal communication, May 21, 1999.

Station 88, located in the City of Indio, serves the northeast portion of the City. The station is equipped with one fire engine, two paid firefighters, as well as a 25 member volunteer company that rotates through all Indio fire stations.

Station 32, located at Avenida Bermudas and Frances Hack Lane, has two paid firefighters and 12 volunteers. It is equipped with two fire engines, one heavy squad vehicle and one rescue squad vehicle.

Station 39 serves the area from Calhoun east to the Coachella Canal, and from Avenue 55 south to Avenue 64, and is located close to the Desert Resorts Airport at 56-925 Tyler Street. It has two fire engines and one water tender, and it is staffed by two paid firefighters and five volunteers.

Station 55 serves a limited portion of northwest La Quinta, and is actually a part of Indian Wells Fire Department. The station covers areas from the western City limits east to Adams Street, and from Highway 111 south to 47th Avenue. It houses a "telesquirt" (a fire engine with a tall ladder), two paid firefighters and a group of volunteers that rotate between all of the Indian Wells fire stations.

Station 31 is located in Bermuda Dunes at 42nd Avenue and Starlight Lane. It serves all of Bermuda Dunes and northern portions of La Quinta. This station has one fire engine, one squad vehicle, and is staffed by two paid firefighters, as well as fifteen volunteers.

Station 81 is the newest addition to the Riverside County Fire Department. It is located on Washington Street, north of Interstate-10, and will be equipped with one fire engine and two paid firefighters.⁶² This station primarily serves development outside the planning area, but will help to supplement station 31. There are currently no volunteers at this station.

2. Project Impacts

An increase in the demand for fire protection services is expected with the implementation of the General Plan and with the associated increase in buildout population. As the planning area is developed, it will be necessary to determine the need for additional services, including additional personnel, firefighters, fire trucks, rescue vehicles, and fire stations. Development in rural, undeveloped areas could result in the need for new fire hydrants and the extension of water mains. Any expansion of fire services may result in significant costs to the City, therefore it is necessary to thoroughly assess the need for additional stations and equipment as buildout occurs.

Proposed Annexation No. 12 and Sphere of Influence Amendment

Stations No. 70 and 39 are the closest fire stations to the annexation and SOI amendment areas. Station 70 is located at the corner of 54th Avenue and Madison Street, approximately one mile west of the annexation area. Station No. 39 is located on Tyler Street, in the immediate vicinity of the Desert Resorts Airport, about one mile east of the SOI amendment area.

⁶² Miguel Rodriguez, Riverside County Fire Department, personal communication, May 23, 2000.

Buildout of the annexation and SOI amendment areas will increase the demand for fire protection facilities, particularly as undeveloped and agricultural lands are converted to urban uses. Given that these areas are largely rural and many properties are not currently connected to CVWD's water delivery system, the extension of water mains and installation of new fire hydrants will be required to provide adequate fire flows to new development. The City will need to monitor urban growth trends in these areas and coordinate with the Riverside County Fire Department and Coachella Valley Water District to assure the timely expansion of facilities and services. This process will include evaluating and implementing funding mechanisms to cover the costs of new services and facilities.

Without mitigation, buildout of the General Plan, Annexation No. 12 and the Sphere of Influence Amendment will result in significant impacts associated with fire protection.

3. Mitigation Measures

In order to ensure that impacts associated with fire protection are reduced to a less than significant level, the following mitigation measures shall be implemented:

- A. The City shall continue to promote close coordination with the Riverside County Fire Department with attention to the timely expansion of facilities and services.
- B. Enforce fire codes and other applicable standards and regulations in the course of reviewing building plans and conducting building inspections.
- C. The siting of industrial facilities which involve the storage of hazardous, flammable or explosive materials shall be conducted in such a manner as to ensure the highest level of safety in strict conformance with the Uniform Fire Code and other applicable codes and regulations.
- D. The Riverside County Fire Department, in its review of new development proposals, shall evaluate project plans and the Department's ability to provide proper fire protection. This review shall include, but shall not be limited to, internal circulation, project directories, street names, and numbering systems. New developments shall comply with City and Fire Department standards.
- E. Coordinate with Coachella Valley Water District and the Myoma Dunes Mutual Water Company to assure adequate water supplies and pressure for existing and proposed development.

Health Care Facilities and Services

1. Existing Conditions

The General Plan planning area has a number of local physicians' offices and urgent care facilities. In addition, there are several large health care facilities located in the Coachella Valley and in the vicinity of the General Plan planning area. The closest facility is the John F. Kennedy Memorial Hospital in Indio. It has 130 patient beds and approximately 85 active physicians. Facilities within

the hospital include an intensive care unit (ICU), a cardiac care unit, a physical therapy unit, a 24-hour emergency room, and other specialized care units.

Palm Springs is home to Desert Regional Medical Center, a private, non-profit hospital with 305 acute-care beds, a Trauma Center, a 24-hour emergency room, trauma center and outpatient services. The facility includes a Home Health Care department to provide in-home nursing care and household maintenance services. The hospital also operates Hospice of the Desert, which offers services to terminally ill patients.

The Eisenhower Medical Center complex in Rancho Mirage is the largest health care facility in the Coachella Valley. It is situated on 98 acres of land, and is home to four facilities: Eisenhower Medical Center, the Betty Ford Center for Chemical Dependency, the Barbara Sinatra Children's Center, and the Annenberg Center for World Health Sciences. In addition, the Andrew Allen Surgical Pavilion will have ten state-of-the-art operating rooms. The medical center has 261 patient beds, and it includes an emergency room, an intensive care unit, a cardiac unit, and other specialized care units.

2. Project Impacts

All health care facilities inside and outside the planning area may be impacted by buildout of the General Plan, and should continue to plan for regional growth. It can be expected that all three Valley hospitals will expand to maintain adequate service as the need is identified.

Proposed Annexation No. 12 and Sphere of Influence Amendment

Although no major health care facilities are located within the boundaries of the proposed annexation and SOI amendment areas, the Coachella Valley region is served by a number of physicians, urgent care centers, and large hospitals. The closest major health facility to the annexation and SOI areas is the John F. Kennedy Memorial Hospital in Indio, which includes a 24-hour emergency room, cardiac care unit, intensive care unit, and approximately 130 inpatient beds.

The combined buildout population of the annexation and SOI amendment areas is expected to be approximately 86,537 residents. All health care facilities in the vicinity may be impacted by buildout of these areas, although these impacts are expected to occur gradually, as new development occurs. Existing facilities will be required to expand, or new providers to enter the market, as development occurs.

3. Mitigation Measures

As privately operated facilities, local and regional medical care facilities will continue to plan for growth, and therefore no mitigation measures are necessary.

Solid Waste Management

1. Existing Conditions

The City of La Quinta and Riverside County contract with Waste Management of the Desert for the collection and disposal of solid waste. Service to La Quinta is based on a franchise agreement that is negotiated every five years. Both residential and commercial services are available. Residential pickup is once a week, while commercial pickup may be up to six times a week.

Solid waste collected in the planning area by Waste Management of the Desert is currently taken to Edom Hill Landfill located on Edom Hill Road in the Indio Hills. The landfill is operated by Riverside County, and accepts waste from most Coachella Valley communities. The current operating permit allows for a maximum of 2,651 tons per day. From August 31, 1998 to August 31, 1999, the Edom Hill Landfill receives an average of 1,167 tons per day.⁶³ The remaining capacity of the site is estimated at 1,900,097 tons, and the projected closure date for the landfill is 2004.

Solid waste from the Thermal community is collected twice a week and transported to the Mecca Landfill rather than the Edom Hill Landfill. The Mecca Landfill is currently receiving 66 tons of solid waste per day.⁶⁴ As of January 1997, the remaining capacity of the landfill was 175,020 cubic yards. The projected closure date for the Mecca Landfill is February 2011, however this date may change depending on future levels of waste generation and demands for landfill space.

Waste Management of the Desert has begun to evaluate other potential disposal sites due to the impending closure of the Edom Hill Landfill. Some of the alternatives being considered include the Eagle Mountain Landfill, the Badlands Landfill, the Lamb Canyon and the El Sobrante Landfills.

In September 1997, the Eagle Mountain Landfill and Recycling Center was approved by the Riverside County Board of Supervisors. It has received all 20 of its required operating permits and will function as a private enterprise. The landfill will comprise 2,164 acres, with a total volume of 708 million tons.⁶⁵ At buildout, the landfill is projected to have a life expectancy of about 100 years. Litigation delays scheduling an opening date at this time.

The Badlands Landfill is another alternative site and is owned and operated by Riverside County. It is located northeast of the City of Moreno Valley off of Highway 60. The total capacity of this site is about 12 million tons, and it receives an average of 4,000 tons per day.⁶⁶

Two other potential disposal sites are the El Sobrante and Lamb Canyon Landfills in western Riverside County. The El Sobrante Landfill is privately owned and operated and is situated south of the City of Corona, and east of Interstate-15 and Temescal Valley Road. Its maximum daily

⁶³ Kathryn Gifford, Planner III, Riverside County Waste Management Dept., letter correspondence, March 6, 2000.

⁶⁴ Steve Lech, Riverside County Waste Management Dept., personal communication, June 3, 1999.

⁶⁵ Kathryn Gifford, Planner III, Riverside County Waste Management Dept., letter correspondence, March 6, 2000.

⁶⁶ Ibid.

disposal is 10,000 tons per day, with an overall capacity of approximately 190 million tons.⁶⁷ This landfill will serve as a long-term disposal site. The Lamb Canyon Landfill is located between the Cities of Beaumont and San Jacinto. It is owned and operated by Riverside County. It currently is capable of receiving 1,900 tons per day, with an overall capacity of 5.9 million tons.⁶⁸

Source Reduction and Recycling

In 1989, the Integrated Waste Management Act, (AB 939) was passed by the State of California. The objective of the bill is to reduce the amount of solid waste being generated throughout the State. The legislation necessitates that each city and county enforce programs that will reduce, recycle and compost 50% of its solid waste by the year 2000.

Waste Management of the Desert has significantly reduced the amount of solid waste disposed of within the planning area through the operation of a curbside recycling program. The program allows for a weekly collection of recyclable materials including glass, aluminum, and newspaper. In 1998, the program resulted in the collection of 3,324 tons of solid recyclable material, and 628 gallons of recyclable oil in the City of La Quinta, with a 24% participation rate.⁶⁹ The program does not currently collect recyclables from Thermal.⁷⁰ However, several privately operated recycling facilities exist throughout the Coachella Valley, and are available for public use.

Hazardous Waste

Hazardous wastes are generated by industrial, commercial and household operations. However, since there are not many large scale industrial operations within the planning area, households produce the majority of hazardous wastes. Gas stations, dry cleaners, pest control companies and other commercial operations produce small amounts of hazardous waste. Limited quantities are also generated by the use of pesticides and fertilizers on agricultural lands and golf courses. Currently the County does not have a disposal program for commercial generation of hazardous wastes. However lists of contractors who do provide service locally are kept by the Riverside County Environmental Health Department.

Household waste disposal services within the planning area are provided by the County. In order to promote proper disposal of household wastes, the Riverside County Department of Environmental Health has the ABOP facility in Palm Springs, as well as a mobile collection unit. Both will accept all types of hazardous wastes with the exception of explosives, bio-hazards, and radioactive materials. Household wastes that are collected include batteries, anti-freeze, waste oil and water-based paint. The mobile collection unit is directed by the Department's Household Waste Program, and it moves to various locations throughout the year to serve the entire Coachella Valley.

2. Project Impacts

Implementation and buildout of the proposed General Plan will increase the generation of solid waste and will heighten the need for disposal sites. Waste Management of the Desert plans on

⁶⁷ Ibid.

⁶⁸ Ibid.

⁶⁹ "1998 Yearly Project Status Report," Waste Management of the Desert, letter to City of La Quinta, dated March 11, 1999.

⁷⁰ Mary Joki, Waste Management of the Desert, June 25, 1999.

providing service to accommodate future development. Continued and increased recycling within the planning area will help lessen the impacts to regional landfills and assist with the City's compliance with AB 939.

Buildout of the General Plan planning area may result in approximately 78,952 dwelling units, which includes both existing and potential residences. Of these, approximately 73,976 will be single-family units, and about 4,976 multi-family units. Buildout could also result in roughly 19,137,651 square feet of commercial development and 28,835,849 square feet of industrial development. Altogether, these lands could generate approximately 234,238 tons of solid waste per year.⁷¹ This estimate assumes moderate density buildout, and actual waste generation may vary, depending on future levels of development at buildout.

None of the land uses proposed within the Plan area are expected to create high quantities of solid waste or severe hazardous waste conditions. Buildout of the planning area will occur gradually over time which will allow for assessment of the impacts as they occur. Nonetheless; the project will increase the volume of solid waste generated, and waste management will need to carefully monitor there levels to assure safe and cost-effective disposal of the City's solid waste.

Proposed Annexation No. 12 and Sphere of Influence Amendment

Based on waste generation rates provided by the California Integrated Waste Management Board, it is estimated that existing development in the proposed annexation area generates approximately 2,689 tons of solid waste per year. Applying the same generation rates, buildout of the annexation area is expected to result in the generation of about 26,069 tons per year.

Existing solid waste production in the SOI amendment area is estimated to be approximately 14,414 tons per year. At buildout, development in the SOI area is expected to produce an estimated 53,272 tons of solid waste per year.

Actual levels of solid waste generated will depend on future levels of development in the annexation and SOI amendment areas. Nonetheless, it is clear that buildout of these areas will substantially increase the generation of solid waste and will heighten the long-term need for disposal sites. Upon annexation, the City will need to expand its contract with Waste Management of the Desert to include pick-up and recycling services to these areas.

Without mitigation, buildout of the General Plan, Annexation No. 12 and the Sphere of Influence Amendment will result in significant impacts associated with solid waste management.

3. Mitigation Measures

Source reduction of waste is the most effective way of lessening the impacts to landfills. The following measures will aid in reducing the amount of waste generated, and therefore mitigate the

⁷¹ California Integrated Waste Management Board compilation of waste generation rates. Rates used are from Ventura County Solid Waste Management Department, "Guidelines for Preparation of Environmental Assessments for Solid Waste Impacts," September 1992; and "DEIR for North Hills Development in Santa Clarita," December 1991.

impacts to landfills, as well as promote City compliance with AB 939.

In order to ensure that impacts associated with solid waste management are reduced to a less than significant level, the following mitigation measures shall be implemented:

- A. All new development shall establish recycling programs as part of the planning process. The program shall include recycling provisions for residences as well as commercial establishments.
- B. Multi-family dwelling units should be provided with recycling receptacles.
- C. Recycling provisions for commercial and business establishments should include separate recycling bins. Items to be recycled at commercial establishments may include white paper, computer legal paper, cardboard, glass and aluminum cans.
- D. As landscaping debris comprises a significant percentage of residential solid waste, developers shall contract for professional landscaping services from companies which compost green waste. Several landscaping companies in the Coachella Valley are currently composting for waste disposal. On-site composting and grass recycling (whereby lawn clippings are left on the lawn) is also encouraged, wherever possible.
- E. Recycling of construction waste through on-site grinders and the use of wood waste recycling facilities is encouraged, wherever possible.
- F. Recycling provisions for single-family and multi-family residential dwelling units shall continue to be included in the City's solid waste disposal contracts.
- G. The City shall ensure that all hazardous materials, whether from construction or operation of land uses within the planning area, are handled, stored, and/or disposed of according to all existing laws and standards at the time such activity takes place.
- H. The City shall coordinate with Waste Management of the Desert to expand curb-side recycling services to the Thermal community.
- I. With the impending closure of the Edom Hill Landfill, the City shall work closely with Waste Management of the Desert to evaluate alternative landfill sites.

Mitigation Monitoring/Reporting Program

- A. The City Community Development Department shall maintain close contact with project developers to assure the provision and maintenance of recycling containers that correspond with current City programs and those planned in the future.

Responsible Parties: City Community Development Department, Waste Management of the Desert

Wastewater Collection and Treatment

1. Existing Conditions

Sewage collection and treatment services are provided to the planning area by the Coachella Valley Water District (CVWD). Wastewater is channelled through sewer trunk lines ranging in size from 4 to 24 inches. The predominant trunk lines found within the planning area are 18-inch force mains located within the rights-of-way of Washington Street, Jefferson Avenue, Madison Street, Avenue 50, Airport Boulevard, Avenue 58 and Avenue 60.

Coachella Valley Water District currently operates two wastewater treatment facilities. The CVWD treatment plant located at Madison Street and Avenue 38 treats approximately 2 million gallons of wastewater per day, and has a current capacity of 2.5 million gallons per day.⁷² This plant treats all wastewater collected north of Miles Avenue. Wastewater from the remainder of the planning area is conveyed to the Mid-Valley Reclamation Plant located between Fillmore and Pierce on Avenue 63. Approximately 4 million gallons of wastewater is treated daily, and the plant's current capacity is about 5.8 million gallons per day.⁷³ CVWD continually increases the capacity of its plants by constructing new treatment ponds, aeration plants and other structures. The CVWD plant at Madison and Avenue 38 is expected to double its capacity within the next year, while the capacity of the Mid-valley Reclamation Plant is expected to increase by 20 percent during the same time period.⁷⁴

2. Project Impacts

Buildout of the proposed General Plan will place additional demands on existing wastewater collection and treatment facilities. Actual wastewater generation rates will depend upon future levels of development. Generally, residential wastewater generation rates differ substantially for residential, commercial and industrial land uses. It is difficult to measure an average generation rate for wastewater, since generation rates are based on the type of land use and its associated operations and facility size. However, CVWD is aware of the potential growth that is likely to occur within the planning area, and monitors generation levels accordingly to ensure quality service to its customers.

Demands for wastewater collection and treatment services to the planning area may increase substantially as buildout occurs. However, future development and related service demands will occur gradually, and the City and CVWD will continue to monitor service capabilities.

Proposed Annexation No. 12 and Sphere of Influence Amendment

The annexation and SOI amendment areas are still largely rural and undeveloped, and only limited parcels are currently connected to CVWD's wastewater treatment system. Any wastewater collected from these lands is conveyed to the Mid-Valley Waste Reclamation Plant, located approximately one mile east of the SOI amendment area, on Avenue 63, between Fillmore and Pierce Streets.

⁷² Bruce Clark, Principal Sanitation Engineer, Coachella Valley Water District, personal communication, July 2, 1999.

⁷³ Ibid.

⁷⁴ Ibid.

Buildout of the annexation and SOI amendment areas will increase the demand for wastewater collection and treatment services. Because wastewater generation rates differ for each development type, it is difficult to anticipate future wastewater production levels in the annexation and SOI amendment areas. Nonetheless, buildout of these areas is expected to result in a combined population of approximately 86,537 residents. It is reasonable to expect that the extension of CVWD's sewer mains and the expansion of its Mid-Valley Reclamation Plant will be required to serve this population.

Impacts to wastewater treatment facilities are not expected to occur immediately, but will occur over the long-term as new development takes place. The City and CVWD will need to continuously monitor growth trends in these areas to assure that adequate wastewater services are provided, and will need to determine and implement appropriate methods of financing sewer extensions and connections.

Without mitigation, buildout of the General Plan, Annexation No. 12 and the Sphere of Influence Amendment will result in significant impacts associated with wastewater management.

3. Mitigation Measures

In order to ensure that impacts associated with wastewater management are reduced to a less than significant level, the following mitigation measures shall be implemented:

- A. All development shall be connected to a city-wide sewer system, to the greatest extent possible. Septic systems shall be prohibited where soil conditions do not permit percolation.
- B. The City shall investigate and evaluate alternative methods of financing a city-wide sewer system and converting existing septic systems to sewer, including redevelopment funds, assessments, and other funding mechanisms.
- C. The City shall cooperate and coordinate with Coachella Valley Water District to assure that adequate wastewater collection and treatment facilities are provided to serve development in the planning area.
- D. The City shall coordinate with Coachella Valley Water District to monitor the demand for tertiary treated water within the planning area, and shall investigate the feasibility of providing tertiary treated water as demand allows.

Mitigation Monitoring/ Reporting Program

- A. The City Planning and Public Works Departments shall confer and coordinate with the Coachella Valley Water District to develop plans for implementing city-wide sewer service
Responsible Parties: City Community Development Department, City Public Works Department, CVWD

Domestic Water Service

1. Existing Conditions

Coachella Valley Water District⁷⁵

The Coachella Valley Water District (CVWD) is responsible for providing potable water to the majority of the planning area. Its service area generally extends from Washington Street near Interstate-10 in the north, to Avenue 56 to the south, as well as limited areas south of Avenue 58. CVWD has eleven active wells within the planning area. A new well is proposed at the northeast corner of Airport Boulevard and Madison Street. The existing wells have been drilled to depths ranging from 700 to 800 feet below the surface. CVWD's newest wells are typically drilled to depths of 1,000 to 1,300 feet. Two inactive wells exist in the planning area within the PGA West development at the southwest corner of 54th Avenue and Madison Street.

Domestic water is conveyed through water mains up to 36 inches in diameter. CVWD's water distribution system includes five booster stations located in the southern portion of the planning area. CVWD also has eight reservoirs with storage capacities ranging from 250,000 to 5 million gallons. In Lake Cahuilla County Park, construction for reservoir #6725 is currently underway, and will have a capacity of 10 million gallons. An additional 5 million gallon reservoir is planned near the southern edge of the Cove at the perimeter of Lake Cahuilla County Park.

Myoma Dunes Mutual Water Company⁷⁶

Domestic water for the Bermuda Dunes community is provided by the Myoma Dunes Mutual Water Company. It operates five active wells at depths of 750 to 800 feet, producing 1,700 to 3,200 gallons of potable water per minute. Three of the production wells discharge water directly into a distribution system, which conveys water through distribution mains ranging in size from 4 to 12 inches in diameter. The remaining two wells deliver water directly into a water reservoir located near the intersection of 41st Avenue and Hermitage Drive. The reservoir has a capacity of one million gallons. Another well is also located in the area, but is used solely by the Bermuda Dunes Airport. At this time, Myoma Dunes Mutual Water Company has no plans for expansion of its water delivery system.

2. Project Impacts

In an effort to aid regional development, the Coachella Valley Water District has derived an aggregate figure for domestic water demand in its service area. This figure does not represent one specific land use, but instead accounts for all water uses in the area, including residential, commercial, and industrial lands, as well as golf course and irrigation. CVWD estimates that the general population consumes approximately 550 gallons of potable water per day (gpd) per capita. Based on the consumption rate of 550 gpd, buildout could increase the demand for water to approximately 114.3 million gallons per day, or about 350 acre-feet per day. While this factor is

⁷⁵ Todd Jorgenson, Coachella Valley Water District, personal communication, June 22, 1999.

⁷⁶ Warren Stallard, General Manager, Myoma Dunes Mutual Water Company, letter correspondence, May 26, 1999.

useful for analysis of future demands, actual impacts may vary depending on the actual number of persons per household at buildout, as well as the level and type of water use that occur within each development.

Implementation and buildout of the General Plan will add to the cumulative effects of urban development on groundwater supplies in the Coachella Valley, which includes the reduction in the amount of potable groundwater in storage. However, increases in demand for water should occur gradually, as additional development takes place.

For a more thorough discussion regarding impacts to water resources and quality, please refer to Section III-F of this document.

Proposed Annexation No. 12 and Sphere of Influence Amendment

As explained in Section III-F of this document, CVWD estimates that the average water consumption rate in the Coachella Valley is approximately 550 gallons per capita per day. This is an aggregate figure that accounts for all water usage in the area, including water consumed by residential, commercial, industrial, and recreational development. At this rate, domestic water consumption in the annexation area would be approximately 18,490,450 gallons per day at buildout. The demand for domestic water in the SOI amendment area would be approximately 29,104,900 gallons per day at buildout. Actual demand will depend upon future levels of development and the efficacy of water conservation measures implemented in the annexation and SOI amendment areas. Although impacts to regional groundwater resources are expected to occur gradually, buildout of these areas will contribute to the cumulative depletion of groundwater in the Coachella Valley.

Without mitigation, buildout of the General Plan, Annexation No. 12 and the Sphere of Influence Amendment will result in significant impacts associated with domestic water.

3. Mitigation Measures

In order to ensure that impacts associated with domestic water are reduced to a less than significant level, the following mitigation measures shall be implemented:

- A. The City, Coachella Valley Water District and/or Myoma Dunes Mutual Water Company shall review all future development projects to assess potential impacts of development activities on local groundwater supplies.
- B. To enhance infiltration of runoff and to replenish groundwater subbasins, the City shall continue to require the construction of on-site stormwater retention or detention basins which are capable of managing the 100-year flood. Development located immediately adjacent to the Whitewater River Stormwater Channel shall continue to have the option of diverting its runoff directly into the channel.

Telephone Service

1. Existing Conditions

Residential and business telephone service in the La Quinta area is provided by Verizon California, headquartered in Thousand Oaks. Local facilities can be found in Palm Springs and Indio. GTE offers customers basic and state-of-the-art services. The company is capable of providing service to expanding areas and expects to build additional facilities as future development occurs.⁷⁷

2. Project Impacts

Buildout of the General Plan area will add to the customer base of Verizon, thereby creating additional demands on the existing infrastructure and requiring expansions of services to areas not currently served. However, beyond this, there are no significant impacts expected which will affect Verizon's ability to provide service to the project area.

Proposed Annexation No. 12 and Sphere of Influence Amendment

Buildout of the annexation area is expected to result in the construction of approximately 12,225 dwelling units and 0.9 million square feet of commercial development. Buildout of the SOI amendment area is expected to generate about 19,243 residential units, 3.5 million square feet of commercial space, and 5.6 million square feet of industrial space. Although development of these structures is expected to occur gradually, they will clearly increase the demand for additional telephone services. Verizon has indicated that it is capable of expanding its infrastructure to accommodate future growth in this portion of the Coachella Valley.

3. Mitigation Measures

In order to ensure that impacts associated with telephone service are reduced to a less than significant level, the following mitigation measures shall be implemented:

- A. Developers shall provide required rights-of-way for new Verizon conduit systems to provide telephone services to their sites.

Electricity

1. Existing Conditions

Electrical service is provided to the planning area by the Imperial Irrigation District (IID). IID operates six substations which serve the planning area, including the following⁷⁸:

⁷⁷ Bob Marra, Public Affairs Representative, GTE California, personal communication, May 17, 1999.

⁷⁸ Dick Macknicki, Imperial Irrigation District, personal communication, May 14, 1999.

- North La Quinta Substation - located at the northwest corner of Adams Street and Westward Ho
- La Quinta Substation - situated on the southwest corner of Avenue 48 and Jefferson Street
- Jefferson Substation - located on Jefferson Street at the northeast corner of Avenue 52
- Marshall Substation - located at the northeast corner of Washington Street and Avenida Ultimo
- Avenue 58 Substation - situated on the northwest corner of Avenue 58 and Monroe Street.
- Thermal Substation - located south of Airport Boulevard and east of Highway 111

All of the substations are gauged at 92 kilovolts, except for the Avenue 58 substation which operates at 161 kilovolts. The substations decrease the voltage to 12 kilovolts for distribution to residences and other developments.

The South Coast Air Quality Management District estimates that residential customers use approximately 6,000 kilowatts per year. Averages for industrial and commercial users are more difficult to determine because use can vary considerably depending on the size and type of land use. Electrical consumption rates, as determined by the South Coast Air Quality Management District, are shown in the following table.

**Table III-37
Estimated Electricity Usage Rates**

Land Use	Annual Usage Rate
Residential	5,626.50 kilowatt-hour/unit/year
Retail Commercial	13.55 kilowatt-hour/sq.ft./year
Restaurant	47.45 kilowatt-hour/sq.ft./year
Hotel/Motel	9.95 kilowatt-hour/sq.ft./year
Office	12.95 kilowatt-hour/sq.ft./year
Food Store	53.30 kilowatt-hour/sq.ft./year
Warehouse Industrial	4.350 kilowatt-hour/sq.ft./year
Misc. Industrial	10.50 kilowatt-hour/sq.ft./year

Source: SCAQMD Air Quality Handbook, Appendix to Chapter 9, April 1993.

IID has indicated that it will be able to supply electricity to future development in the planning area and expects to build additional facilities as development occurs. IID has already identified the need for a new substation between the La Quinta city limits and the Desert Resorts Airport to meet future demand, but its precise location has not yet been determined.⁷⁹

⁷⁹ Ibid.

2. Project Impacts

General Plan buildout could result in the consumption of approximately 1,042,013,553 kilowatt-hours per year.⁸⁰ This estimate assumes that buildout will occur at moderate densities, and it includes both existing and future development within the planning area. Actual consumption rates will depend upon future levels of development, individual project design, implementation of energy-efficient designs into new buildings, as well as local, state and federal energy conservation measures in effect at the time of development. The project itself will contribute to the cumulative demand for additional generating capacity in the future, but is not expected to significantly impact the accessibility of electricity or the ability of IID to provide it.

The Imperial Irrigation District has indicated that it will be able to supply electricity to additional development in the project area. It is IID's objective to plan for and accommodate future development in order to avoid potential service deficiencies. IID has identified the need for a new substation between the La Quinta city limits and the Desert Resorts Airport to meet future demands, but the exact placement of this substation has not yet been determined.

Proposed Annexation No. 12 and Sphere of Influence Amendment

Applying the SCAQMD electricity usage rates provided in the table above, buildout of the annexation area is expected to result in the consumption of approximately 85,571,273 kilowatt-hours (kwh) per year. Buildout of the SOI amendment area is expected to generate the demand for about 222,270,392 kwh per year. These projections include electricity demanded by both existing and future development. Actual consumption will depend upon future levels of development and the efficacy of applied energy conservation measures.

Approval of the proposed annexation and SOI amendment is not expected to result in an immediate demand for additional electricity, as no development projects are planned for immediate construction. However, buildout of these areas will require the gradual expansion of IID's infrastructure and will contribute to the regional demand for electricity.

Without mitigation, buildout of the General Plan, Annexation No. 12 and the Sphere of Influence Amendment will result in significant impacts associated with electric service.

3. Mitigation Measures

In order to ensure that impacts associated with electric service are reduced to a less than significant level, the following mitigation measures shall be implemented:

- A. Developers shall coordinate and cooperate with Imperial Irrigation District in implementing load management programs which level demand load on generating capacities. Every effort shall be made to assure the highest level of energy conservation available.

⁸⁰ Based on CEQA Air Quality Handbook, Appendix to Chapter 9. Prepared by South Coast Air Quality Management District, April 1993. Calculations provided in Section III, Air Quality Analysis of this document.

- B. Any proposed development in the General Plan planning area shall be subject to the requirements of the Uniform Building Code and Title 24 of the California Administrative Code.
- C. Project developers shall be required to utilize energy efficient design to minimize summer-time solar gains and reduce air-conditioning loads. The use of energy efficient lighting fixtures in developments within the planning area shall be required.

Mitigation Monitoring/Reporting Program

- A. The City Community Development Department, Public Works Department, and Building Department shall inspect all detailed project plans for conformance with Title 24 energy conservation code requirements. Imperial Irrigation District and the City Community Development Department shall provide developers with references for energy efficient design.
Responsible Parties: City Community Development, Public Works, and Building Departments, Imperial Irrigation District
- B. Prior to the undergrounding of utility lines, all impacted utility companies shall be contacted for detailed information about system restrictions, district boundaries, and scheduling.
Responsible Parties: The Gas Company, Coachella Valley Water District, Myoma Dunes Mutual Water Company, Verizon California, Imperial Irrigation District.

Natural Gas

1. Existing Conditions⁸¹

The Gas Company provides natural gas service to the City and its planning area through a series of pipelines of differing sizes and pressure capacities. Transmission, supply and distribution lines provide service to the majority of the planning area, including Bermuda Dunes, the City of La Quinta, and the Thermal community, but service is currently limited south of Airport Boulevard.

Natural gas is delivered to the area through high pressure transmission lines located north of Interstate-10. They are 36-inch lines with pressures levels ranging from 400 to 700 pounds per square inch (psi). The pressure is reduced at different limiting stations, which then directs the gas to supply lines. Supply lines are 2 to 8 inches with pressure levels ranging from 175 to 400 psi. The planning area's supply lines are located along Washington Street, Highway 111, and Harrison Street right-of-ways. The pressure is reduced again at regulator stations, which transfer natural gas to distribution lines for transportation to homes and businesses. Distribution lines are 2 to 4-inch steel or plastic pipes that operate at 45 to 55 psi. Natural Gas is not currently provided to some areas in the Cove and all developments south of Calle Chihuahua. Residents in these areas use propane gas as an alternative fuel source.

The average household in the Gas Company's service area consumes approximately 6,600 cubic feet of natural gas per month. The South Coast Air Quality Management District's (SCAQMD) estimations for natural gas consumption factors are identified in the following table

⁸¹ Minio Garcia, Land Planning Technician, The Gas Company, personal communication, July 2, 1999.

Table III-38
Natural Gas Consumption Factors

Land Use	Monthly Use Rate
Single Family Residential	6,665.0 cf/unit/month
Multiple Family Residential	4,011.5 cf/unit/month
Retail/Shopping Center	2.9 cf/sq. ft./month
Office	2.0 cf/sq. ft. /month
Hotel/Motel	4.8 cf/sq. ft./month
Industrial	4.8 cf/sq. ft./month

Note: Industrial usage factor used is equivalent to the highest commercial usage factor provided by SCAQMD. Source: SCAQMD Air Quality Handbook, Appendix to Chapter 9, April 1993.

The Gas Company has indicated that it will accommodate new development in the planning area by working closely with developers to build extensions for buildout areas.

2. Project Impacts

Buildout of the proposed General Plan is expected to result in a demand increase for natural gas. Natural gas consumption may increase to approximately 708 million cubic feet per month at buildout. This estimation assumes that development will occur at moderate densities, and includes both existing and future development. Actual consumption rates of natural gas will be dependent upon future levels of development and individual project design, as well as measures to improve energy efficiency and/or conservation. Development within the planning area will add to the cumulative impacts on the long-term availability of natural gas by increasing the rate of consumption. Nonetheless, buildout of the General Plan, in and of itself, is not expected to significantly impact natural gas supplies or the ability of The Gas Company to provide it.

Proposed Annexation No. 12 and Sphere of Influence Amendment

Applying the SCAQMD natural gas consumption factors described in the table above, buildout of the annexation area is expected to result in the consumption of approximately 80.8 million cubic feet of natural gas per month. Buildout of the SOI amendment area is expected to result in the consumption of about 163.8 million cubic feet per month. These estimates include both existing and future development. Actual consumption will depend upon future levels of development and the efficacy of energy conservation measures. Buildout of these areas is not expected to result in significant or immediate impacts to natural gas supplies or the Gas Company's service capabilities. Nevertheless, it will contribute to the cumulative demand for natural gas resources.

Without mitigation, buildout of the General Plan, Annexation No. 12 and the Sphere of Influence Amendment will result in significant impacts associated with natural gas service.

3. Mitigation Measures

In order to ensure that impacts associated with natural gas service are reduced to a less than significant level, the following mitigation measures shall be implemented:

- A. Developers shall install the most efficient furnaces, water heaters, pool heaters and other equipment that use natural gas. Developers shall also promote the use of kitchen appliances that use natural gas and shall inquire about the possibility of using alternative, renewable energy sources, including solar and wind turbine technologies.
- B. The City shall strictly enforce Title 24 of the California Administrative Code, which addresses energy conservation in new developments.

Mitigation Monitoring/ Reporting Program

- A. The City Community Development and Public Works Departments shall inspect all detailed project plans to ensure that all requirements for Title 24 energy conservation code are being met. The Community Development Department shall coordinate with the Gas Company to provide developers with references for energy efficient design.

Responsible Parties: City Community Development Department, City Public Works Department, The Gas Company

Cable

1. Existing Conditions

Time Warner, whose local service office is located on North Farrell Drive in Palm Springs, provides cable service to the planning area. Time Warner uses both overhead and underground lines to provide of basic channels as well as cable channels to individual residences and businesses. Time Warner negotiates a franchise agreement every fifteen years with the City, and the last agreement was approved in 1996.⁸² Time Warner has indicated that it will be capable of serving new development in the planning area and throughout the Coachella Valley.

2. Project Impacts

No significant impacts are anticipated which will affect Time Warner's ability to provide cable service to the project area. However, buildout of the proposed General Plan is expected to place additional demands on existing cable infrastructure, and will increase the demand for Time Warner's services. Time Warner has indicated that it plans for future growth and is capable of serving the entire Coachella Valley.

⁸² Britt Wilson, Assistant to the City Manager, City of La Quinta, personal communication, October 26, 1999.

Proposed Annexation No. 12 and Sphere of Influence Amendment

Given that residential development will account for a substantial percentage of new development in the annexation and SOI amendment areas, buildout of the annexation and SOI areas will increase the demand for cable services and infrastructure. The City and Time Warner will need to monitor growth trends in these areas to plan for the orderly and efficient extension of cable services.

Without mitigation, buildout of the General Plan, Annexation No. 12 and the Sphere of Influence Amendment will result in significant impacts associated with cable service.

3. Mitigation Measures

In order to ensure that impacts associated with cable service are reduced to a less than significant level, the following mitigation measures shall be implemented:

- A. The City will work closely with Time Warner to assess the need for additional facilities and services, and to assure that new development is able to receive cable service, to the greatest extent practical.

M. Socio-Economic Resources

1. Existing Conditions

Economic conditions in the City of La Quinta and the larger Coachella Valley are closely tied to those of Southern California. The Southern California region, as defined by the Southern California Association of Governments (SCAG), includes Los Angeles, Ventura, San Bernardino, Riverside and Imperial Counties. Since 1920, the SCAG region has grown rapidly, with a population increase of 171% between 1920 and 1940. The post-war period was characterized by explosive growth, and by 1970 the regional population had grown to more than 10 million. By the late 1990s, the Southern California population had reached about 18 million.

Like the rest of Southern California, Riverside County has experienced substantial growth over the past several decades and has been one of the nation's fastest growing counties. From 1970 to 1980, the County's population grew from 456,914 to 663,166, an increase of 45.1 percent. Between 1980 and 1990, the population grew by 76.5 percent to 1,170,413 residents. The California Department of Finance population estimates for January 1999 placed the County's population at 1,473,307, a 25.9 percent increase over 1990 population figures.⁸³

As is apparent from the discussion above, the Coachella Valley is located within an area characterized by rapid growth and economic strength. Over the past three decades, the Coachella Valley has expanded to become one of the premier destination resort areas in the country. The City of La Quinta has also exhibited a demographic and economic strength which has been largely based upon the promotion of a resort lifestyle. From 1990 to 1998, it was the fastest growing city in the Coachella Valley, with population increases averaging 10.4% per year.⁸⁴ The City represents a

⁸³ "City/County Population and Housing Estimates," California Department of Finance, January 1, 1999.

relatively new market in the Coachella Valley, and has positioned itself as a sub-regional retail center for the eastern portion of the valley. The City also enjoys an excellent visitor image, which is enhanced by the national recognition of the La Quinta Hotel and PGA West.

The following discussion includes economic development trends for the City of La Quinta, including population, income and housing trends which define the demographic characteristics of the area and provide a basis for future growth trends and analysis.

Demographics

Population

From 1990 to 1999, the City's permanent population increased from 11,215 to 21,763 residents, for a total increase of 10,548 residents, or about 94%.⁸⁵ According to a city-based market analysis, the City's population is expected to increase to approximately 29,700 by the year 2005.⁸⁶

Demographic trends in La Quinta indicate the emergence of a new affluent seasonal population. It is estimated that the City's seasonal population has grown from about 5,500 in 1990 to nearly 9,100 in 1998, for an average growth rate of 6.4 percent.⁸⁷ The seasonal population is not considered part of the City's permanent population, but nonetheless plays an important role in the City's economy.

Household Size

Household size defines the average number of people living in a dwelling. It does not include those living in group housing; however, their effect on the City average is very limited. The average household size in the City has increased from approximately 2.852 in 1990, to 3.228 in 1999.⁸⁸

Age

In 1998, the median age in La Quinta was 32 years, younger than the Coachella Valley and State of California averages of 35 and 36 years, respectively. The following table illustrates the City's 1990 age distribution.

⁸⁴ "1998-99 Economic Development Plan," prepared by Rosenow Spevacek Group, Inc., April 1998.

⁸⁵ California Department of Finance, April 1990 and January 2000.

⁸⁶ "La Quinta Market Analysis and Competitive Position Within the Coachella Valley," Sedway Group, January 25, 1999.

⁸⁷ Ibid.

⁸⁸ California Department of Finance, April 1990 and January 1999.

**Table III-39
La Quinta
Age Distribution -1990**

Age Range	% of Population
Less than 5 years	9.6%
5-17 years	20.3%
18-24 years	8.1%
25-44 years	35.0%
45-54 years	8.9%
55-64 years	8.5%
65+ years	9.6%
TOTAL:	100%

Source: 1990 Census Data, as provided by Wheeler's Desert Letter, 1991.

The City of La Quinta is primarily a caucasian community, with approximately 76.5% of the population describing themselves as "white," 2.4% as "black," and 21.2% as "other races."⁸⁹ In 1993, approximately 30% of the population was of Hispanic origin.⁹⁰

Employment and Income Characteristics

In 1990, the City of La Quinta had a total of 5,368 employed persons. The employment participation rate for the City was 69.5% of all persons 16 years or older, with an unemployment rate of 6.1%.⁹¹ As shown in the following table, sales and executive/managerial industries accounted for the largest percentages of the City's occupations in 1990, closely followed by clerical, specialty and construction-related occupations.

⁸⁹ "Demographic Reference Guide, Zip Code Edition," Urban Decision Systems, 1993.

⁹⁰ Ibid.

⁹¹ 1990 Census Data, as provided in "Wheeler's Desert Letter," 1992 edition.

Table III-40
Occupations in the City of La Quinta - 1990

Occupation	Number of Residents	% of Working Population
Executive and Managerial	828	15%
Professional Specialty	671	13%
Technicians	93	2%
Sales	816	15%
Admin. Support/Clerical	772	14%
Private Household	57	1%
Protective Service	73	1%
Other Service Occupations	695	13%
Farming/Forestry/Fishing	224	4%
Production/Craft/Repair	705	13%
Operatives/Assemblers	143	3%
Transportation/Material Moving	110	2%
Handlers and Laborers	181	3%
Total:	5,368	100%

Source: 1990 Census Data, as provided in "Wheeler's Desert Letter," 1992 edition.

The City's employers represent a varied mix of employment opportunities, with the greatest number of people being employed by the Westfield Shopping Town in Palm Desert, as shown in the table below.

**Table III-41
Major Employers in the City of La Quinta - 1997**

Business	No. of Employees
Westfield Shopping Town	2,500
Coachella Valley Unified School District	1,500
Desert Sands Unified School District	1,385
County of Riverside	1,400
La Quinta Hotel	800
J.F. Kennedy Hospital	600
Fantasy Springs Casino	590
Coachella Valley Water District	400
Spotlight 29 Casino	350
Wal-Mart	300

Source: "Community Economic Profile for La Quinta, Riverside County, California," Riverside County Economic Development Agency, 1997.

In 1990, the City's median household income was \$39,572.⁹² This figure is comfortably higher than the Coachella Valley, Riverside County and state of California median household incomes, which were \$29,500, \$33,100 and \$35,800, respectively.⁹³ The City's median household income has continued to increase in recent years, and by 1997, it had reached \$54,041.⁹⁴ La Quinta residents also enjoy a higher per capita income (\$19,700) than other Coachella Valley (\$17,400) and Riverside County (\$18,400) residents.⁹⁵

Retail Sales Potential

The City of La Quinta is a relatively new market in the Coachella Valley, but has emerged as a viable sub-regional retail center for the eastern valley. The taxable sales figures in the table below describe the City's taxable sales trends from 1994 through 1998. During this five-year period, taxable sales for all retail outlets grew by approximately 93%, indicating the strength of the City's new economy.

⁹² "Community Economic Profile for La Quinta, Riverside County, California," Riverside County Economic Development Agency, 1997.

⁹³ Table III-6, "Profile of Development Prospects for the Cathedral City General Plan," Economics Research Associates, February 15, 1996.

⁹⁴ "Community Economic Profile for La Quinta, Riverside County, California," Riverside County Economic Development Agency, 1997.

⁹⁵ "1998-99 Economic Development Plan: Strategies and Tasks to Stimulate Private Investment in La Quinta," Rosenow Spevacek Group, Inc., April 1998.

Table III-42
1994-1998 Taxable Sales Trends
City of La Quinta (\$000)

Year	Total Retail Stores	Total All Outlets
1994	78,171	110,861
1995	87,366	121,428
1996	95,852	132,892
1997	112,997	159,146
1998	157,724	213,973

Source: "Taxable Sales in California (Sales & Use Tax)," California State Board of Equalization.

An important indicator of the City's relative strength in retail sales is derived from a comparison of the City's taxable sales with expenditures by its residents. Market "leakage" occurs when potential spending is not fully captured by City businesses, while "attraction" represents an economy in which more sales are captured than are generated by City residents.

Analysis of sales leakage/attraction within the City of La Quinta indicates that the City had an overall net attraction of \$1.8 million in 1997.⁹⁶ Further analysis shows that, while La Quinta experienced net attraction in sales by food stores, eating and drinking establishments, and other retail (including building materials and general merchandise), it also experienced substantial leakage in apparel stores, home furnishings and appliances, and other retail including gifts, books, jewelry, and art goods. A substantial portion of these sales are being captured by Westfield Shopping Town and The Gardens on El Paseo in Palm Desert, approximately six miles west of La Quinta.⁹⁷

Over the past several years, La Quinta has emerged as a sub-regional retailing center in the eastern portion of the Coachella Valley, attracting Wal-Mart, Home Depot, Eagle Hardware and other large "box" retailers. La Quinta is currently underserved in the areas of apparel, home furnishings, and general merchandise.⁹⁸ Continued development of sub-regional retail establishments along the Highway 111 corridor will further strengthen La Quinta's role in the regional market.

⁹⁶ "La Quinta Market Analysis and Competitive Position Within the Coachella Valley," Sedway Group, January 25, 1999.

⁹⁷ Ibid.

⁹⁸ Ibid.

Housing Market Trends

From 1980 to 1990, the number of housing units in the City grew from 1,364 to 3,931, for an increase of about 188% during this ten-year period.⁹⁹ By 1999, the number of dwelling units in the City had increased by 180% to 11,019,¹⁰⁰ indicating substantial population growth and contributing to the City's recognition as the second fastest growing city in California from 1990 to 1997.¹⁰¹

The following table illustrates the types of housing units in the City in 1999. It is evident that the majority of structures in the community are single-family detached dwellings.

**Table III-43
Housing Characteristics in the
City of La Quinta - 1999**

Unit Type	No. of Units	% of Total
Single Family Detached	7,815	71%
Single Family Attached	2,260	21%
Multiple Family Units (2-4)	191	2%
Multiple Family Units (5+)	506	4%
Mobile Homes	247	2%
Total:	11,019	100%

Source: California Department of Finance, January 1999.

A substantial portion of La Quinta's housing market is driven by upscale resort residential development, including high-end custom homes and build-to-suit home sites. Prices for custom estate homes can reach as high as \$2.5 million.¹⁰² However, the City has been able to provide a full range of residential products, from quality affordable housing to master planned communities. In 1996, the median housing value in La Quinta was \$117,400, and approximately 36% of owner occupied units were in the \$50,000 to \$99,999 value range.¹⁰³ The primary market for new homes in La Quinta is the second-home buyer; one La Quinta home builder has indicated that 95% of its buyers are purchasing a second home.¹⁰⁴

⁹⁹ "Community Economic Profile for La Quinta, Riverside County, California," Riverside County Economic Development Agency, 1997.

¹⁰⁰ California Department of Finance, January 1, 1999.

¹⁰¹ "La Quinta Market Analysis and Competitive Position Within the Coachella Valley," Sedway Group, January 25, 1999.

¹⁰² "Community Economic Profile for La Quinta, Riverside County, California," Riverside County Economic Development Agency, 1997.

¹⁰³ "Wheeler's Desert Letter," January 1, 1996.

¹⁰⁴ "La Quinta Market Analysis and Competitive Position Within the Coachella Valley," Sedway Group, January 25, 1999.

Growth Forecasting

The Coachella Valley is one of the fastest growing regions in California and is expected to continue to grow in the near future. Growth projections indicate that approximately 15,500 new residents per year are expected to move to the valley through year 2010, and that the Coachella Valley's total population could exceed 500,000 by 2010.¹⁰⁵

Growth projections for the City of La Quinta indicate a similar trend. Sedway Group projects that, by year 2005, the City's permanent population will reach approximately 29,700 and its seasonal population will reach 15,600.¹⁰⁶ The Southern California Association of Governments (SCAG) has also developed demographic forecasts designed to assist the City other agencies in projecting future population and economic trends. SCAG forecasts are illustrated in the following table, and indicate that the City is expected to experience continued healthy growth through 2020, and that the projections may be low, given the City's current population.

Table III-44
Growth Forecasts for the City of La Quinta
Years 2000-2020

Projection	2000	2005	2010	2015	2020
Population	20,400	22,700	24,900	27,500	30,500
Households	6,300	7,000	7,900	8,800	9,700
Employment	9,200	11,200	13,500	16,000	18,200

Source: Southern California Association of Governments, letter correspondence dated September 18, 2000

2. Project Impacts

The City has evaluated a broad range of land use development scenarios, and has examined issues regarding visitor-serving development and other revenue-generating land uses that can benefit from existing and planned infrastructure. The socio-economic impacts associated with implementation of the proposed General Plan are expected to be positive. The proposed project has the potential to generate revenues from a wide range of sources, most notably property, transient occupancy and sales taxes. Buildout of the planning area, however, will also generate additional costs for the provision of general government services and expanded infrastructure. The following discussion addresses the potential fiscal impacts associated with General Plan buildout.

¹⁰⁵ "1998-99 Economic Development Plan: Strategies and Tasks to Stimulate Private Investment in La Quinta," Rosenow Spevacek Group, Inc., April 1998.

¹⁰⁶ "La Quinta Market Analysis and Competitive Position Within the Coachella Valley," Sedway Group, January 25, 1999.

General Plan Buildout Population Summary

The California Department of Finance estimates that the average household size in the City of La Quinta is 3.263 persons per household.¹⁰⁷ This figure most likely overestimates the City's actual average household size. It is derived by dividing the City population by the number of occupied housing units, but it does not account for 38.83% of the total housing units, which are occupied, on a seasonal basis. A straightline comparison of the City's population (24,240 residents) and its total number of dwelling units (12,141 units) yields an average household size of only 1.99 persons per household in the City of La Quinta. The average household size in the Thermal portion of the planning area is generally larger than that in the City of La Quinta, and is estimated to be approximately 2.75 persons per household.¹⁰⁸ Therefore, to provide a conservative buildout population estimate for the entire planning area, an average household size of 2.75 is used in the following analysis and throughout this EIR.

As shown in Table I-2 and discussed throughout Section III, buildout of the proposed General Plan is expected to result in the development of approximately 66,811 new dwelling units. At the rate of 2.75 persons per household, General Plan buildout could generate an additional 183,730 residents within the planning area. When combined with the current City population of 24,240 persons¹⁰⁹, the City's population at General Plan buildout could potentially reach 207,970 persons. This is a conservative, long-range estimate that assumes all residential lands within the planning area will develop at 75% of the maximum densities permitted.

Residential Property Tax Revenues

According to the California Department of Finance, there are 12,141 existing dwelling units in the City of La Quinta.¹¹⁰ The average sales price for single-family residences built between 1978 and 1999 in the City is approximately \$189,965.¹¹¹ Applying this value to the number of existing dwelling units yields a total estimated residential property value of \$2,306,365,065 for existing residential units.

Given the City's rapid population growth over the past decade, and its ability to provide a balance of housing opportunities for both permanent and seasonal residents, the median housing value is expected to rise over the life of the proposed General Plan. For the purposes of this analysis, the average value of future dwelling units in the planning area is projected to be \$364,229.¹¹² With 66,811 potential new units to be constructed at General Plan buildout, the total property value of future dwelling units in the planning area is expected to be approximately \$24,334,503,719.

The combined property value of both existing and future dwelling units is estimated to be about \$26,640,868,784, as described in the paragraphs above. Property taxes are collected annually by

¹⁰⁷ California Department of Finance, January 2000.

¹⁰⁸ Demographic Data, Thermal area, Urban Decision Systems, 1999.

¹⁰⁹ Ibid.

¹¹⁰ Ibid.

¹¹¹ Average sales price for single-family dwelling unit with 1,1600 to 2,200 square feet, built between 1978 and 1999, as provided by La Quinta Palms Real Estate Multiple Listing Service, October 1999.

¹¹² Average sales price of new single-family residences in 10 new development projects in La Quinta, as provided in the La Quinta General Plan Update Housing Element, prepared by The Planning Center, 2000. Actual sales prices range from \$136,990 in Sienna Del Rey to \$720,000 in The Citrus/Tesoro.

Riverside County at a rate of 1% of assessed value. Property taxes collected on all residential units at General Plan buildout are estimated at about \$266,408,688 annually. Property tax revenues are reallocated to the City of La Quinta and other taxing entities based on formulas derived by the State of California. The City of La Quinta's General Fund receives 25% of the total property tax collected, which is estimated to total approximately \$66,602,172 at General Plan buildout.

It should be noted that the analysis above is a rough estimate of residential property tax revenues and is intended to provide a broad overview of revenues expected at General Plan buildout. Actual revenues will depend upon the level of residential development that occurs over the life of the General Plan and the assessed valuation of residential property in the City. These and other estimations in this section are calculated in year 2000 dollars.

Commercial Property Tax Revenues

Buildout of the planning area under the proposed General Plan is expected to result in the development of approximately 19,137,651 square feet of commercial space. A comparison of typical commercial construction in the Coachella Valley indicates that community retail structures are valued at approximately \$95 per square foot. This is a conservative estimate that does not include the value of hotel and motel commercial development. Future commercial development in the City of La Quinta is expected to include luxury and resort hotels with values that exceed \$95 per square foot. Nonetheless, this value is used in the following analysis as a benchmark by which the value of all commercial development in the planning area can be estimated.

Assuming that the value of all commercial development at General Plan buildout will average \$95 per square foot, the total value of commercial land will be approximately \$1,818,076,845. Property taxes are collected at a rate of 1% of assessed value, and therefore, total property taxes collected annually on all commercial development within the planning area are estimated at \$18,180,768. The City would retain 25% of this, or approximately \$4,545,192 annually. Actual revenues will depend upon the extent of commercial development that actually occurs at General Plan buildout, and the assessed value of commercial land, structures and improvements.

Industrial Property Tax Revenues

Buildout of the proposed General Plan is expected to result in the development of an estimated 28,835,849 square feet of industrial space, including both existing and future industrial development. The value of industrial development is estimated at approximately \$65 per square foot, including land and all structural and non-structural improvements. At this rate, the value of all industrial lands at General Plan buildout would be approximately \$1,874,330,185, which would generate an estimated \$18,743,301 in annual property taxes. Of this, the City of La Quinta would retain approximately \$4,685,825. Actual revenues will depend upon the level of industrial development that actually occurs over the life of the General Plan, as well as the assessed value of industrial lands, structures and other improvements.

Sales Tax Revenues

A substantial portion of City revenue is derived from the sales tax, which is levied on retailers who sell taxable goods within the City limits. In fiscal year 1999/2000, sales taxes accounted for more than \$2.5 million, or 16.5% of the City's total General Fund revenues.¹¹³ Of the sales tax imposed on taxable goods by the State Board of Equalization, one percent (1%) is allocated back to the City.

The Urban Land Institute (ULI) distinguishes between two primary types of commercial development: "community" commercial and "neighborhood" commercial.¹¹⁴ "Community" commercial development consists of larger-scale community shopping centers and malls that may be anchored by several department stores or other large-scale anchors. The ULI estimates that the upper decile sales volume of tenants in "Community Commercial" centers is \$343.83 per square foot of gross leasable area.¹¹⁵ "Neighborhood" commercial development is defined as smaller-scale neighborhood shopping centers conveniently located near residential areas, as well as a variety of specialty retail shops and personal service businesses. According to the ULI, the upper decile sales volume of tenants in these commercial centers is \$358.62 per square foot of gross leasable area.¹¹⁶

To determine sales tax revenues anticipated at General Plan buildout, the sales volumes figures described above must be applied to commercial development in the planning area. The following table identifies the various commercial land use designations established by the proposed General Plan, and for each land use designation, indicates how much development is expected to be "Community Commercial" or "Neighborhood Commercial."

¹¹³ City of La Quinta Budget, Fiscal Year 2000-2001.

¹¹⁴ "Dollars and Cents of Shopping Centers," Urban Land Institute, 1997.

¹¹⁵ Ibid, Table 5-5. The demographics in the City of La Quinta are sufficiently high that the City can support sales volumes at the upper decile.

¹¹⁶ Ibid, Table 6-5.

Table III-45
Sales Tax Generating Development at General Plan Buildout

Land Use Designation	Sq. Ft. Expected to Develop as "Community" Commercial¹	Sq. Ft. Expected to Develop as "Neighborhood" Commercial¹
Mixed Use Commercial	2,491,632	2,491,632
Community Commercial	4,638,269	0
Neighborhood Commercial	0	1,954,972
Commercial Park*	122,665	0
Office	0	0
Tourist Commercial**	0	772,972
Village Commercial	0	1,284,149
Total:	7,252,566 sq. ft.	6,503,725 sq. ft.

¹ as defined by the Urban Land Institute in "Dollars and Cents of Shopping Centers," 1997.

* The Commercial Park designation permits office, warehouse, and light industrial development, which are not significant generators of sales tax revenue. Only 20% (122,665 sq. ft.) of Commercial Park development is expected to generate sales tax revenues at General Plan buildout.

** Tourist Commercial land is expected to develop as hotels/motels, which generate sales tax revenues only through ancillary facilities such as on-site restaurants and specialty shops. At General Plan buildout, only 3.5% (772,972 sq. ft.) of all Tourist Commercial land is expected to consist of ancillary facilities that generate sales tax revenues. Based on 3.5% ancillary facilities at La Quinta Hotel site.

As shown in the table above, the planning area is expected to include approximately 7,252,566 square feet of "Community" commercial development at General Plan buildout. It is presumed that 95% (6,889,938 sq. ft.) of this space will be leasable, and the remaining 5% will consist of mechanical equipment, restrooms, public common areas, and related spaces that are not typically leased by tenants. Applying ULI's upper decile sales volume of \$343.83 per square foot to the amount of leasable community commercial space yields an estimated annual sales volume of \$2,368,967,383. Of this, one cent of each taxable dollar will be contributed to the City's General Fund. This equates to approximately \$23,689,673 in annual sales tax revenues to the City.

The table above indicates that the planning area is expected to contain an estimated 6,503,725 square feet of "Neighborhood" commercial development at General Plan buildout. Assuming that 95% (6,178,539 sq. ft.) of this development is leasable space, and applying ULI's upper decile sales volume of \$358.62 per square foot of leasable space yields an estimated sales volume of \$2,215,747,656. Of this, the City would receive an estimated \$22,157,476 annually.

In summary, buildout of all commercial lands in the planning area, including both "community" and "neighborhood" commercial development, could generate annual sales tax revenues of about \$45,847,149 to the City. This figure is expressed in year 2000 dollars and represents the minimum net revenue gain to the City, assuming that annual incremental increases will be realized from inflation. It also assumes full occupancy of all commercial centers. It is important to note that most,

but not all items sold in the planning area will be taxable. Therefore, the above estimate may overstate potential revenues to a limited degree, but still provides a useful benchmark by which potential sales tax revenues can be measured.

Transient Occupancy Tax Revenues

Revenues from Existing Hotels

Transient Occupancy Taxes (TOT) are imposed by the City on “transients” who occupy a room in a hotel or other lodging facility for 30 days or less. The City’s TOT rate is 11% for hotels with convention facilities and 10% for all others. The Transient Occupancy Tax currently represents the largest single revenue source in the City’s General Fund, and in fiscal year 1999/2000 accounted for nearly \$3.5 million, or about 23% of the City’s General Fund revenues.¹¹⁷ This revenue was derived from the 735 existing hotel/motel rooms in the City.

Revenues from Future Hotels

Future hotel/motel development in the planning area is expected to include 217 new rooms at the proposed Embassy Suites hotel, as well as other future hotel/motel facilities constructed on vacant lands. Under the proposed General Plan, additional hotel/motel development will be permitted on lands assigned the following land use designations: Mixed Use Commercial, Community Commercial and Tourist Commercial.

Mixed Use Commercial Land

As shown in Table I-2, the Recommended Alternative Land Use Buildout Statistical Summary, there are approximately 323 vacant acres available for future Mixed Use Commercial development. It is anticipated that 10% (32 acres) of Mixed Use Commercial lands will develop as hotels/motels, at a density of 25 rooms per acre, for a total of 800 rooms.

Community Commercial Land

Under the proposed General Plan, hotel/motel development will also be permitted on lands designated as Community Commercial, which are generally concentrated around the Highway 111 corridor. It is likely that 100% of these lands will develop as community-scale shopping centers or other larger, regional retail centers, and that none of the vacant acres will develop as hotels/motels.

Tourist Commercial Land

One hundred percent of the vacant Tourist Commercial acres (179 acres) are expected to develop as hotels and motels. Development on these lands will most likely consist of luxury and resort hotels, with an average density of about 16 rooms per acre¹¹⁸, for a total of 2,864 rooms.

Potential Revenues

As described in the paragraphs above, buildout of the planning area could result in the development of approximately 3,664 new hotel/motel rooms. Considering La Quinta’s reputation as a world-renowned resort destination, it is assumed that future hotel room rates will average \$200 per night. Assuming a 68% occupancy rate, each new hotel room in the planning area could generate revenues of approximately \$49,640 per year.

¹¹⁷ Ibid.

¹¹⁸ Based on room density at La Quinta Hotel (724 rooms on 45 acres).

The City retains an 11% Transient Occupancy Tax (TOT) on hotels with convention facilities, and a 10% TOT on those without. To provide a conservative estimate of TOT revenues, it is assumed that new hotels will not include convention centers and that the City will impose a 10% TOT on all hotels. At this rate, the City would generate annual TOT revenues of \$4,964 per room, or \$18,188,096 annually on all of the anticipated 3,664 new hotel rooms. When combined with TOT revenues from existing hotel/motel rooms, City TOT revenues could reach \$21,650,296 annually.¹¹⁹

Motor Vehicle In-Lieu Fees

A sizable portion of the City's annual revenues is derived from the State of California in the form of motor vehicle in-lieu fees, which are imposed on motorists in-lieu of a local property tax. In fiscal year 1999/2000, motor vehicle in-lieu fees accounted for \$940,000 of the City's General Fund revenues, or approximately \$38.78 per capita.¹²⁰ Applying this figure to the anticipated General Plan buildout population of 207,970 residents, motor vehicle in-lieu fees could potentially generate \$8,065,077 in annual General Fund revenues at General Plan buildout. This estimate is based on the 1999/2000 per capita factor and does not account for any future increases in per capita revenues.

Other Development-Related Revenues

The City General Fund includes a number of other revenue sources, in addition to those discussed above. Some such sources include business licenses, building permits, developer impact fees and plan check fees, which are directly related to the level of urban development that occurs in the City. These fees are based on project-specific criteria, including the size and type of construction, architectural features, and site improvements. It is beyond the scope of the proposed General Plan to determine the site-specific characteristics of future development projects in the City, and attempts to quantify projected revenues from these development-related fees at this time would be meaningless. Nonetheless, implementation of the proposed General Plan will clearly facilitate the development of additional residential, commercial, and industrial development, and is therefore expected to have a net positive impact on development-related revenue sources.

Project-Generated Costs

The City of La Quinta provides a number of public services to its residents, including general government administration, fire and police protection, parks and recreation facilities, library services, and street maintenance. The City has budgeted \$15,252,431 in General Fund expenditures for fiscal year 2000/2001 to pay for these and other public services and facilities.¹²¹ On a per capita basis, this equates to approximately \$629 per resident.¹²² Buildout of the planning area could generate a total City population of about 207,970 residents, which would result in expenditures of about \$130,813,130 for public services.

¹¹⁹ Includes \$18,188,096 anticipated TOT revenues from future hotel development, and \$3,462,200 actual TOT revenues collected from existing hotel development in FY99/00, as shown in La Quinta City Budget, FY 00/01.

¹²⁰ City of La Quinta Budget FY 00/01. Per capita figure derived by dividing total in-lieu fee revenues by year 2000 City population of 24,240 residents, as provided by California Department of Finance.

¹²¹ City of La Quinta Budget, FY 2000/2001.

¹²² Based on the City's 2000 population (24,240 residents), as provided by California Department of Finance.

**Table III-46
General Plan Buildout Cost/Revenue Analysis**

Item	Annual City Cost	Annual City Revenue
General Administration & Services	\$130,813,130	
Residential Property Tax Revenues		\$66,602,172
Commercial Property Tax Revenues		\$4,545,192
Industrial Property Tax Revenues		\$4,685,825
Sales Tax Revenues		\$45,847,149
Transient Occupancy Tax Revenues		\$21,650,296
Motor Vehicle In-Lieu Fees		\$8,065,077
Subtotal:		\$151,395,711
Resulting Annual Positive Cash Flow:	\$20,582,581	

Cost/Benefit Analysis

As demonstrated in the table above, buildout of the proposed General Plan is expected to have a net positive effect on the City's economy. The analysis above is intended to provide a broad overview of projected costs and revenues, and does not include additional revenues which will be derived from project-specific sources, including developer impact fees, plan check and engineering fees, building permits and business licenses.

It is important to note that the City realizes economies of scale with new development and the provision of public services, especially with "in-fill" projects that are surrounded by existing development. The contract for fire protection, for example, does not change based on the addition of one structure, per se. Rather, the base costs associated with the provision of services remains constant, and the only cost increase is associated with the added time required to answer calls at the new development, once constructed.

Proposed Annexation No. 12

Buildout of the proposed annexation area is expected to generate a total population of approximately 33,619 residents. This is a long-range estimate that includes existing and future residents, assumes an average household size of 2.75 persons, and assumes that all lands designated for residential development will be developed at 75% of the maximum densities permitted. Buildout of the annexation area is also expected to result in the development of 12,225 dwelling units (including 232 existing units and 11,993 future units) and approximately 946,724 square feet of commercial space. For the purpose of estimating sales tax revenues, this commercial space is expected to consist of 755,492 square feet of "Neighborhood Commercial" development and 191,232 square feet of "Community Commercial" development. The proposed land use plan does not provide for any industrial or hotel/motel development in the annexation area, but does include about 42 acres for major community facilities and about 601 acres of golf course, park, and open space uses.

Buildout of the annexation area will generate additional revenues for the City in the form of property tax, sales tax, motor vehicle in-lieu fees, and other development-related revenues such as business licenses, developer impact fees, and plan check fees. Additional costs associated with the provision of fire and police protection and other governmental services will also be incurred. The following table summarizes projected costs and revenues resulting from buildout of the annexation area. These estimates have been calculated using the same methods used earlier in this section to project costs and revenues for buildout of the recommended General Plan.

Table III-47
Annexation No. 12 Cost/Revenue Analysis

Item	Annual City Cost	Annual City Revenue
General Administration & Services	\$21,145,722	
Residential Property Tax Revenues		\$11,030,676
Commercial Property Tax Revenues		\$224,846
Industrial Property Tax Revenues		\$0
Sales Tax Revenues		\$3,198,512
Transient Occupancy Tax Revenues		\$0
Motor Vehicle In-Lieu Fees		\$1,303,706
Subtotal:	\$21,145,722	\$15,757,740
Resulting Annual Cash Flow:	- \$5,387,982	

As shown in the table above, buildout of the annexation area could result in an annual revenue shortfall of approximately \$5,387,982. This is largely due to the fact that, under the City's proposed land use plan, the majority of land in the annexation area is designated for residential uses. The costs associated with providing municipal services to residential lands are typically greater than any property tax revenues they generate. Potential revenues are further limited in the annexation area by the absence of industrial and hotel/motel lands, and the potential property tax and transient occupancy tax revenues they could generate. Limited commercial acreage restricts the potential for significant sales tax revenues.

The analysis above is intended to provide a broad overview of anticipated costs and revenues associated with buildout of the annexation area. It does not include additional revenues, which will be derived from project-specific sources, such as developer impacts fees and building permit fees. Actual costs and revenues will depend upon future levels of development, the value of land and improvements, and City financing mechanisms and policies. Furthermore, buildout of the area will occur in conjunction with buildout of other parts of the City, where commercial and industrial development will be completed. Such development is likely to offset the negative cash flow generated by a mostly residential annexation.

Sphere of Influence Amendment

Buildout of the SOI amendment area is expected to result in the development of approximately 19,243 dwelling units (including 837 existing units and 18,406 potential units). At a rate of 2.75 persons per household, buildout would generate a population of approximately 52,918 residents. The SOI amendment area is also expected to accommodate an estimated 3,557,857 square feet of commercial space and 5,680,528 square feet of industrial space. For the purpose of estimating potential sales tax revenues, the commercial space is divided in the following manner: 399,620 square feet of "Neighborhood Commercial" development, and 2,739,260 square feet of "Community Commercial" development (the remaining 418,977 square feet of commercial space are designated for Office Commercial development, which is not considered to be a generator of sales tax revenue). The proposed land use plan also includes approximately 36 acres for major community facilities and 641 acres of open space.

Anticipated costs and revenues associated with buildout of the SOI amendment area are shown in the table below.

**Table III-48
Sphere of Influence Amendment Area Cost/Revenue Analysis**

Item	Annual City Cost	Annual City Revenue
General Administration & Services	\$33,282,422	
Residential Property Tax Revenues		\$17,157,499
Commercial Property Tax Revenues		\$844,991
Industrial Property Tax Revenues		\$923,085
Sales Tax Revenues		\$10,308,939
Transient Occupancy Tax Revenues		\$0
Motor Vehicle In-Lieu Fees		\$2,052,160
Subtotal:	\$33,285,422	\$31,286,674
Resulting Annual Cash Flow:	- \$1,998,748	

As illustrated in the table above, buildout of the SOI amendment area is expected to result in a negative annual cashflow of about \$2 million to the City General Fund. As with the annexation area, the vast majority of these lands are to be developed for residential land uses. The table above does not include additional City revenues, which would result from developer impact fees, building permit fees, business licenses, plan check fees, and other project-specific development fees. The estimates for City costs listed in this and the preceding table are likely to be conservative, insofar as the City achieves economies of scale as it grows and provides services, and the per capita expenses are therefore likely to be lower than represented. However, as with Annexation No. 12, development in other parts of the City is likely to offset the numbers depicted above in the long term.

Without mitigation, buildout of the General Plan, Annexation No. 12 and the Sphere of Influence Amendment will result in significant impacts associated with socio-economic resources.

3. Mitigation Measures

In developing the proposed General Plan, the City has examined a broad range of commercial, resort-oriented and industrial development scenarios that are intended to optimize existing and planned facilities, services and infrastructure. In addition to adopting and implementing the proposed Plan, a wide range of opportunities should be pursued to further strengthen and diversify the City's solid economic foundation. While the City has positioned itself as an important sub-regional retail center for the eastern-central Coachella Valley, it must continue to respond to increasing competition among Coachella Valley communities for major development projects. The City should continue to exploit its international reputation as a luxury resort community, while simultaneously striving to diversify its economic base. In order to ensure that impacts associated with socio-economic resources are reduced to a less than significant level, the following mitigation measures shall be implemented:

- A. The City shall continue to identify potential public and private revenue sources to finance infrastructure improvements in the Village and along the Highway 111 commercial corridor. Where appropriate, the City shall enter into agreements with developers that lead to their shared participation in financing such improvements.
- B. Evaluate the demand for a new regional shopping mall in the eastern Coachella Valley and determine the feasibility of attracting such a facility to La Quinta.
- C. Continue to support the development of new golf and/or luxury hotel/resort facilities within the City.
- D. Promote in-fill development in existing commercial centers, particularly along the Highway 111 corridor.
- E. The City shall continue to fast-track the development permitting process and assist in the design of on- and off-site improvements for project proposals expected to substantially enhance the City's economic base.
- F. Pursue joint efforts with local and regional agencies regarding the expansion of the Desert Resorts Airport to support the transportation needs of the City's resort and retail industries.
- G. Encourage development of live/work housing opportunities (i.e. artists' lofts) in the Village.
- H. The City shall promote and consider further investments in art, theater and related development proposals that preserve or enhance the City's cultural resources and expand the City's economic base.

- I. Continue to develop, publish and routinely update marketing pieces, which showcase the City's resort, recreation, commercial and housing opportunities.
- J. Continue to support and promote a balance of housing products, including affordable and senior housing.

Mitigation Monitoring/Reporting Program

- A. The City shall implement an Economic Development Strategy that enhances and maintains its role as an important commercial center serving the eastern Coachella Valley.
Responsible Parties: Community Development Department, City Council
- B. The City shall coordinate with the Coachella Valley Water District to assure sufficient water and sewer infrastructure to enhance economic development opportunities in the south-central portion of the planning area.
Responsible Parties: Community Development Department, Engineering Department, Coachella Valley Water District

CITY OF LA QUINTA

DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE COMPREHENSIVE GENERAL PLAN, ANNEXATION NO. 12 AND SPHERE OF INFLUENCE AMENDMENT

IV. UNAVOIDABLE SIGNIFICANT IMPACTS

Introduction

Unavoidable significant impacts are project-related environmental effects which have been identified as being significant and where no feasible mitigation is available to reduce the impact to a less-than-significant level (CEQA Guidelines Section 15126.2).

Section III of this EIR thoroughly assessed all impacts associated with future development within the annexation area, sphere of influence (SOI) amendment and General Plan planning area as a whole. These assessments are concluded by a broad and comprehensive range of mitigation measures and monitoring and reporting programs, which have been developed to address potential impacts. These measures along with the policies, programs, and implementation measures set forth in the City Draft General Plan can demonstrably and effectively reduce potentially significant impacts to levels of insignificance.

However, a few areas of special concern and sensitivity still persist and have been given focused consideration in the development of the General Plan and in the development of mitigation measures. These include impacts on biological resources, water resources, geotechnical hazards, air quality and traffic impacts. While the General Plan represents a substantial overall limitation in potential impacts, these sensitive issues are not taken for granted, and each is discussed briefly below.

Biological Resources

Development in any area results in the conversion of lands, and eliminating open space areas. This alteration to the natural environment has many direct and indirect effects to plant and animal species, largely due to the loss of resources and habitat. While these effects may constitute unavoidable impacts to biological resources, they are regarded in planning efforts undertaken by the City and

thoroughly addressed throughout the proposed Draft General Plan. Policies and programs set forth in the Plan provide coherent and concerted measures to protect and preserve natural resources. They include restrictions to hillside and mountain development, discouraging landscapes with non-native plant species, and assessing all impacts associated with developing on vacant lands.

Additionally, as a member of the CVAG-coordinated effort to develop the Coachella Valley Multiple Species Habitat Conservation Plan, the City is continuing and extending its role as a responsible steward of biological resources. Through the development and implementation of the subject General Plan and associated EIR, the City continues to demonstrate its ability and willingness to implement federal and other guidelines in the protection of threatened and endangered species.

Water Resources

The impacts of the proposed Plan, including the annexation and SOI amendment, on water resources are expected to be greater than those associated with buildout of the current General Plan and are expected to contribute to the cumulative impacts of urban development on groundwater resources in the Coachella Valley. This limited resource will continue to be placed in an overdraft condition unless additional resources are secured for groundwater recharge (also see Sections III and VIII of this EIR)

The continuing efforts of the City, Coachella Valley Water District and Myoma Dunes Water District to limit the overall and per capita consumption of domestic water is an inherent part of the goals, policies and programs of the Draft General Plan. The City and Coachella Valley Water District have developed and are promoting water-conserving practices, including the continued use of native and non-native drought tolerant landscaping, and water-efficient plumbing features in new development. The City is also directed to coordinate with local water purveyors to expand groundwater recharge efforts.

Geotechnical Hazards

The City and the planning area are subject to a variety of geotechnical forces which may constitute hazards to property and lives. These potential hazards include ground acceleration or shaking, rock falls and landslides, liquefaction, seismic induced settlement and seismic induced inundation. Section III-C of this EIR and the geotechnical report prepared for the General Plan¹ address the various potential geotechnical hazards of the planning area. To limit these adverse effects, a variety of mitigation measures are set forth in both documents and are incorporated into the General Plan. In addition to the mandatory preparation of fault hazard and other special studies, the General Plan land use plan acts to reduce the exposure of people and property to potential damage due to substantial seismic events. In conjunction with the implementation of the latest versions of the Uniform Building Code, the policies and programs of the General Plan and the mitigation measures set forth in this document are expected to keep potential geotechnical impacts below levels of significance.

¹ "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," prepared by Earth Consultants International, November 10, 1999.

Traffic and Circulation

The proposed plan substantially increases the amount of potential residential development by 41,923 dwelling units. The majority of these additional residential lands are designated as very low and low density residential, and are particularly concentrated in the southeasterly portion of the planning area. These designations include an agricultural overlay, which maintains the existing rural character of the area thereby directing development further from major roadways. The plan also slightly increases the amount of commercial lands by 373 acres. These additional commercial lands are located primarily along the Highway 111 corridor, Washington Street, Eisenhower Drive, and Harrison Street near the Desert Resorts Airport. It should be noted that a substantial portion of the traffic expected to be associated with these future commercial centers is primarily comprised of traffic already on the roadway.

Nonetheless, traffic is an ongoing issue, and is expected to increase over time. With buildout of the proposed plan the total number of trip ends is expected to increase by 1,200,150 daily trip-ends. Therefore, the City has prepared the Draft General Plan with a clear goal toward the preservation of roadway capacity and the assurance of safe and efficient transportation system. Both the proposed plan and the EIR set forth a wide range of policies, programs and mitigation measures which address traffic issues. Furthermore, close consultation with CalTrans and Riverside County will also serve to assure compatible interconnections between jurisdictional systems.

The development and implementation of Transportation Demand Management (TDM) techniques, the increased use of alternative modes of travels, and the use of traffic congestion management strategies should contribute to an improvement in roadway functioning as the planning area builds out. General Plan policies and programs include the integration of the above mentioned transportation demand management programs, an on-going intersection monitoring program, and a variety of roadway and intersection improvements.

Air Quality

Implementation of the proposed General Plan, including the annexation area and SOI amendment area, can be expected to result in an increase in the levels of pollutants which affect the Coachella Valley and the City of La Quinta. Air pollutants come from a variety of sources, and are generally associated with urban development. The most significant air quality impacts result from emissions generated by vehicular traffic, site disturbance, grading and construction activity, and the consumption of natural gas and electricity in the planning area. While the generation of these emissions are thoroughly assessed and mitigated on a project by project basis, and are spread out over the long-term life of the General Plan, they constitute an unavoidable impact to air quality. Nevertheless, advancements in future technologies and pollution reduction are occurring all the time and will help to improve air quality. Additionally, the South Coast Air Quality Management District continually coordinates with CVAG and the City of La Quinta to regulate issues pertaining to regional air quality.

CITY OF LA QUINTA

DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE COMPREHENSIVE GENERAL PLAN, ANNEXATION NO. 12 AND SPHERE OF INFLUENCE AMENDMENT

V. PROJECT ALTERNATIVES

Introduction

Section III of this document contained detailed analysis of the impacts associated with the development of the proposed Recommended Alternative, including buildout of the recommended alternative for Annexation No. 12 and the Sphere of Influence amendment area, and addressed a full range of environmental issues, including traffic and circulation, hydrology, water resources, biological and cultural resources, air quality, noise and public services.

This section of the EIR evaluates the same range of issues as they relate to three alternative land use scenarios. The three project alternatives addressed in this section include: 1) No Project Alternative, which represents development conditions under the existing General Plan; 2) the More Intense Alternative; and 3) the Less Intense Alternative. The attributes of each alternative are described below, and subsequent discussion focuses on the relative impacts of each. In order to provide a clear comparison of the alternatives, all impacts are analyzed under buildout conditions.

A. No Project Alternative: The Existing La Quinta General Plan

The No Project Alternative represents the continued implementation of the existing City General Plan. It also reflects current Riverside County land use designations on those portions of the planning area currently under the jurisdiction of Riverside County. The existing General Plan serves as the foundation upon which the Recommended Alternative and two other alternative land use plans are based.

The existing General Plan land use plan is illustrated in Exhibit V-1. The Plan is best characterized as creating a low density resort residential community, with the most intense land uses occurring along Washington Street and Avenue 50. It continues a residential development pattern that consists of predominantly low density attached and detached single family units within standard subdivisions and planned residential developments. As shown in Table V-1, buildout of the residential component of the existing General Plan is expected to result in approximately 37,018 dwelling units, including existing and future units. Like the Recommended Alternative discussed in Section III, buildout of the No Project Alternative is based upon the assumption that future residential development will occur at 75% of the maximum densities permitted.

At buildout of the existing General Plan, approximately 88% of all residential units are expected to be in the 0 to 8 units per acre range, and the remaining 12% are expected to be in the 9 to 16 units per acre range. Buildout of the existing General Plan would result in about 41,934 fewer units than buildout of the Recommended Alternative. This is primarily due to the assignment of different land use designations in the southerly and southeasterly portions of the planning area. Under the existing General Plan, lands generally located between Monroe Street and Tyler Street are designated for Very Low Density Residential or Agricultural uses. The density of dwelling units in this area ranges from 0 to 2 units per acre, which limits the number of total potential dwelling units possible and contributes to the preservation of the area's rural character. Under the Recommended Alternative discussed in Section III, however, this portion of the planning area is designated for Low Density Residential development with an Agricultural Overlay. Densities range from 0 to 4 units per acre, essentially doubling the number of potential dwelling units in this area.

Buildout of the existing General Plan would result in approximately 373 fewer acres (3,574,535 fewer square feet) of commercial space than buildout of the Recommended Alternative. Under the existing General Plan, commercial development is concentrated along Highway 111 and Washington Street, with smaller pockets of Commercial and Tourist Commercial scattered throughout the remaining planning area. The Recommended Alternative, however, facilitates an additional strip of Community Commercial development adjacent to the Desert Resorts Airport, and additional pockets of Tourist Commercial and Community Commercial development in the vicinity of PGA West.

The existing General Plan includes four industrial land use designations, and buildout of this Plan would result in the development of about 20,142,143 square feet (1,360 total acres) of industrial development. This represents 8,693,706 fewer square feet (587 total acres) of building

space than facilitated by the Recommended Alternative. The Recommended Alternative simplifies industrial land use designations by assigning only one industrial category, and applies the designation to 587 more acres than the existing General Plan, including lands east of Highway 111/Southern Pacific Railroad near the planning area boundary in Thermal.

The existing General Plan dedicates 2,404 acres to public and quasi-public space, including land for major community facilities, schools, airports and other institutional facilities. This is comparable to the 2,483 acres designated as public and quasi-public space under the Recommended Alternative. The additional 79 acres provided under the Recommended Alternative account for community facilities located on 58th Avenue, between Madison and Monroe Streets, and at 48th Avenue and Dune Palms.

Open Space lands include parks, golf courses, watercourse/flood control facilities, mountainous slopes and other open spaces. The existing General Plan dedicates 12,357 acres to open space, which represents 1,763 fewer Open Space acres than provided under the Recommended Alternative. The Recommended Alternative designates additional golf courses in the central and southern portions of the City as Open Space.

Exhibit V-1 illustrates the land use pattern provided under the existing General Plan, and Table V-1 quantifies its development potential.

Annexation No. 12 and Sphere of Influence Area

Under the No Project alternative, both the annexation area and the SOI amendment area would be expected to develop under their current designations in Riverside County. As a result, the areas outside the already approved Specific Plans at Coral Mountain and Kohl Ranch would remain primarily in agriculture. The most significant difference between this alternative and the Recommended Alternative is clearly the number of dwelling units which would result. As can be seen in Table V-1, the new residential units generated on lands currently designated for agriculture throughout the planning area would only total 284. In the annexation and SOI areas, a total of 4,800 new residential units could be expected, resulting in a total number of residential units of 5,869, a reduction of 25,599 units from the Recommended Alternative. There would be no conversion of agriculture to residential development at urban densities.

This alternative would also result in less commercial development in the SOI amendment area, insofar as lands designated in the Recommended Alternative for Community Commercial development along the western side of Harrison Street, and at the corners of Avenue 58 and Monroe, would remain under County agricultural designations. Industrial lands would not significantly change, since they currently occur under the County General Plan around the Desert Resorts Airport and within the Kohl Ranch Specific Plan area.

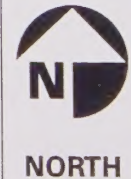
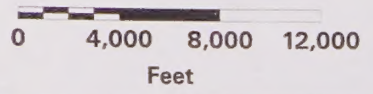
Exhibit V-1

City of La Quinta
General Plan
(Existing)

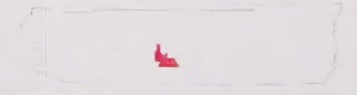
LEGEND

- Roads
Township/Range Sections
Railroads
City Limits
General Plan Planning Area
City Sphere of Influence
- Residential Land Uses
VLDR Very Low Density 0-2 du/ac
AG Agriculture 1 du/ac
4
3B 0.2-0.4 du/ac
3A 0.4-2 du/ac
LDR Low Density 2-4 du/ac
2B 2-5 du/ac
MDR Medium Density 4-8 du/ac
2A 5-8 du/ac
2A MF 5-8 du/ac
RM 8 du/ac
MHDR Medium-High Density 8-12 du/ac
HDR High Density 12-16 du/ac
RH 15 du/ac
Hillside Overlay
Rural Residential Overlay
Non-Residential Overlay
- Commercial Land Uses
M/RC Mixed Commercial
AP/MU Air Park/Mixed Use
CC Community Commercial
C Commercial
NC Neighborhood Commercial
CP Commercial Park
O Office
TC Tourist Commercial
VC Village Commercial
- Other Land Uses
HI Heavy Industrial
LI Light Industrial
M Manufacturing
MC Major Community Facilities
PF Public Facilities
School
P Park Facilities
OS Open Space
G Golf Course Open Space
W Watercourse/Flood Control
AP Airport

Scale
1:31,875



Riverside County Vicinity Map



Map Prepared on: July 28, 2000

Map Prepared by: Aerial Information Systems

Map Version No.: 5



**Table V-1
Current General Plan
Land Use Buildout Statistical Summary**

Land Use	Total Acres	Dev. Acres	Vacant Acres	Existing Units	Potential Units ¹	Buildout Units
AG Agriculture (1 du/10 ac)	19,938	16,152	3,786		284	
4 (0 - 0.2 du/ac)	395	124	271		41	
VLDR Very Low Density (0-2 du/ac)	891	571	320		480	
3B (0.2 - 0.4 du/ac)	275	234	41		12	
3A (0.4 - 2 du/ac)	719	459	260		390	
LDR Low Density (2-4 du/ac)	7,481	3,760	3,721	11,197*	11,163	32,631
2B (2-5 du/ac)	2,518	1,153	1,365		5,119	
RL (4 du/ac)	419	208	211		633	
MDR Medium Density (4-8 du/ac)	1,626	1,235	391		2,346	
2A (5-8 du/ac)	55	45	10		60	
2A MF (5-8 du/ac)	209	158	51		306	
RM (8 du/ac)	459	359	100		600	
MHDR Medium-High (8-12 du/ac)	479	336	143		1,287	
HDR High Density (12-16 du/ac)	101	1	100	944**	1,200	4,387
RH (15 du/ac)	188	103	85		956	
Residential Subtotal	35,753	24,898	10,855	12,141	24,877	37,018
	Total Acres	Dev. Acres	Vacant Acres	Existing Sq.Ft. ²	Future Sq.Ft. ²	Total Sq.Ft. ²
M/RC Mixed Commercial	588	156	432	1,494,979	4,139,942	5,634,921
AP/MU Air Park/Mixed Use	84	70	14	670,824	134,165	804,989
CC Community Commercial	111	20	91	191,664	872,071	1,063,735
C Commercial	217	136	81	1,303,315	776,239	2,079,554
NC Neighborhood Commercial	75	54	21	517,493	201,247	718,740
CP Commercial Park	64	0	64	0	613,325	613,325
O Office	88	48	40	459,994	383,328	843,322
TC Tourist Commercial	272	166	106	1,590,811	1,015,819	2,606,630
VC Village Commercial	125	72	53	689,990	507,910	1,197,900
Commercial Subtotal	1,624	722	902	6,919,070	8,644,046	15,563,116
HI Heavy Industrial	132	132	0	1,954,973	0	1,954,973
LI Light Industrial	121	121	0	1,792,058	0	1,792,058
M Manufacturing	1,041	458	583	6,783,163	8,634,463	15,417,626
W/D Warehousing/Distribution	66	48	18	710,899	266,587	977,486
Industrial Subtotal	1,360	759	601	11,241,093	8,901,050	20,142,143

Table V-1 (cont'd)
Current General Plan
Land Use Buildout Statistical Summary

	Total Acres	Dev. Acres	Vacant Acres	Existing Sq.Ft.²	Future Sq.Ft.²	Total Sq.Ft.²
MC Major Community Facility	115	103	12	--	--	--
PF Public Facility	37	0	37	--	--	--
School	68	57	11	--	--	--
AP Airport	2,184	560	1,624	--	--	--
Public/Quasi-Public Subtotal	2,404	720	1,684	--	--	--
P Park Facilities	909	795	114	--	--	--
OS Open Space	7,855	1,890	5,965	--	--	--
G Golf Course	2,992	2,646	346	--	--	--
W Watercourse/Flood Control	601	468	133	--	--	--
Open Space Subtotal	12,357	5,799	6,558	--	--	--
Total	53,498	32,898	20,600	--	--	--

* Includes attached and detached single family housing units, as categorized by CA Dept. of Finance, 2000.

** Includes multi-family housing units from two to five-plus and mobile homes, as categorized by CA Dept. of Finance, 2000.

¹ Assumes 75% of the total number of units possible, at maximum permitted density.

² Assumes 22% lot coverage for commercial development, and 34% lot coverage for industrial development.

B. Alternative I: More Intense Development Scenario

Alternative I represents a more intense development scenario than the Recommended Alternative. The land use configuration for this alternative is illustrated in Exhibit V-2, and a statistical land use summary is provided in Table V-2.

The overall land use pattern established by the More Intense Alternative is similar to those established by the Recommended Alternative and the existing General Plan. Although the More Intense Alternative provides 29 fewer acres of residential development than the Recommended Alternative, it facilitates the development of 18,223 more dwelling units. This is primarily the result of removing the Agricultural Overlay from lands in the south-central portion of the planning area, and allowing these lands to develop entirely as low-density residential.

Under the Recommended Alternative, residential lands in the eastern planning area include an Agricultural Overlay. Although these lands are designated for Low Density Residential development, the Agricultural Overlay provides property owners with the option of continuing to cultivate existing farms. Under the Recommended Alternative, lands that remain in cultivation will not be available for future low density residential development. Buildout of this portion of the planning area, therefore, will result in a combination of agricultural and low density residential development.

Under the More Intense Alternative, however, the Agricultural Overlay is removed, and all lands are available for low density residential development. In addition, the Low Density Residential land use designation is expanded to allow densities of up to 5 dwelling units per acre, which represents an increase of one dwelling unit per acre over the Recommended Alternative. The More Intense Alternative also facilitates more medium and high density residential development than the Recommended Alternative, particularly in the northern portion of the planning area along Washington Street, Jefferson Avenue and Avenue 42. As a result, buildout of the More Intense Alternative is expected to result in a substantial increase of 18,223 dwelling units, or about 23% more than the Recommended Alternative.

The More Intense Alternative provides for a limited increase of about 29 acres of commercial lands over the Recommended Alternative, but facilitates the same amount of industrial, public and quasi-public, and open space lands as the Recommended Alternative.

Annexation No. 12 and Sphere of Influence Amendment

Under this alternative, the Agricultural Overlay does not apply to any of the residential lands within the annexation and SOI areas, and the low density residential density is increased to 5 units per acre. As a result, the area could see up to 37,313 residential units, 5,845 more than under the Recommended Alternative. This alternative also results in an additional 71.3 acres of vacant high density residential lands, with an additional 856 residential units. Altogether, an additional 6,701 units could be expected in these areas under this alternative.

Under this alternative, commercial and industrial development would be equivalent to that in the Recommended Alternative.

Exhibit V-2

City of La Quinta

General Plan

(High Density Alternative)

LEGEND

- Roads**
 Township/Range Sections
 Railroads
 City Limits
 General Plan Planning Area
 City Sphere of Influence
- Residential Land Uses**
 LDR Low Density up to 5 du/ac
 MDR Medium Density up to 8 du/ac
 MHDR Medium-High Density up to 12 du/ac
 HDR High Density up to 16 du/ac
 Hillside Overlay
- Commercial Land Uses**
 M/RC Mixed Commercial
 CC Community Commercial
 NC Neighborhood Commercial
 CP Commercial Park
 O Office
 TC Tourist Commercial
 VC Village Commercial
- Other Land Uses**
 I Industrial
 MC Major Community Facilities
 P Park Facilities
 OS Open Space
 G Golf Course Open Space
 W Watercourse/Flood Control
 AP Airport
- P** Floating Park Designation

Scale
1:31,875

0 4,000 8,000 12,000
Feet



NORTH

Riverside County Vicinity Map



Map Prepared on: July 28, 2000
 Map Prepared by: Aerial Information Systems
 Map Version No.: 5



Table V-2
Alternative I: More Intense Development Scenario
Land Use Buildout Statistical Summary

Land Use	Total Acres	Dev. Acres	Vacant Acres	Existing Units	Potential Units ¹	Buildout Units
VLDR Very Low Dens. (0-2 du/ac)	0	0	0		0	
LDR Low Dens. (2-5 du/ac)	29,713	9,207	20,506	11,197*	76,898	91,323
MDR Medium Dens. (4-8 du/ac)	2,291	1,753	538		3,228	
MHDR Medium-High Dens (8-12 du/ac)	563	351	212	944**	1,908	5,852
HDR High Dens. (12-16 du/ac)	355	105	250		3,000	
Residential Subtotal	32,922	11,416	21,506	12,141	85,034	97,175
	Total Acres	Dev. Acres	Vacant Acres	Existing Sq.Ft. ²	Future Sq.Ft. ²	Total Sq.Ft. ²
M/RC Mixed Commercial	554	197	357	1,887,890	3,421,202	5,309,092
CC Community Commercial	471	288	183	2,759,962	1,753,726	4,513,688
NC Neighborhood Commercial	213	137	76	1,312,898	728,323	2,041,221
CP Commercial Park	64	0	64	0	613,325	613,325
O Office	84	44	40	421,661	383,328	804,989
TC Tourist Commercial	507	328	179	3,143,290	1,715,393	4,858,683
VC Village Commercial	133	89	44	852,905	421,661	1,274,566
Commercial Subtotal	2,026	1,083	943	10,378,606	9,036,958	19,415,564
I Industrial	1,947	1,199	748	17,757,670	11,078,179	28,835,849
MC Major Community Facility	299	239	60	---	---	---
AP Airport	2,184	560	1,624	---	---	---
Public/Quasi-Public Subtotal	2,483	799	1,684	---	---	---
P Park Facilities	922	795	127	---	---	---
OS Open Space	7,902	1,713	6,189	---	---	---
G Golf Course	4,694	3,624	1,070	---	---	---
W Watercourse	602	469	133	---	---	---
Open Space Subtotal	14,120	6,601	7,519	---	---	---
Total	53,498	21,098	32,400	---	---	---

* Includes attached and detached single family housing units, as categorized by CA Dept. of Finance, 2000.

** Includes multi-family housing units from two to five-plus and mobile homes, as categorized by CA Dept. of Finance, 2000.

¹ Assumes 75% of the total number of units possible, at maximum permitted density.

² Assumes 22% lot coverage for commercial development, and 34% lot coverage for industrial development.

C. Alternative II: Less Intense Development Scenario

Alternative II describes a land use configuration that results in less intense development than the Recommended Alternative. Although the Less Intense Alternative designates 241 more acres for residential development than the Recommended Alternative, it results in a substantial decrease in the number of potential dwelling units, approximately 41,605 fewer units than the Recommended Alternative. The substantial difference in the number of potential dwelling units is primarily due to the assignment of different land use designations and densities in the south-central portion of the planning area. Under the Recommended Alternative, lands generally located between Monroe Street and Tyler Street are designated for Low Density Residential development. Vacant lands in this area can develop at densities of up to 4 units per acre. Under the Less Intense Alternative, however, these lands are designated for Very Low Density Residential development, and vacant lands may be developed at densities of up to only 2 dwelling units per acre. This difference in land use designations also occurs elsewhere in the planning area and substantially decreases the development potential of the Less Intense Alternative.

The Less Intense Alternative also designates fewer acres for commercial development than the Recommended Alternative. The Less Intense Alternative provides for 241 fewer acres, or about 2,309,550 fewer square feet of developable commercial space, than the Recommended Alternative. Lands designated for Tourist Commercial development in the Recommended Alternative are changed to Low and Very Low Density Residential in the Less Intense Alternative at the following locations: Eisenhower Drive at Coachella Drive, south of Avenue 52 and west of Jefferson Avenue, and the northeast corner of Avenue 54 and Madison Street.

The location and acreage of Industrial, Public/Quasi-Public, and Open Space lands are the same under the Less Intense Alternative and the Recommended Alternative.

The land use pattern established by the Less Intense Alternative is illustrated in Exhibit V-3, and a buildout land use statistical summary is provided in Table V-3.

Annexation No. 12 and Sphere of Influence Amendment

Under this alternative, most lands currently designated Low Density residential would be assigned the Very Low Density residential designation. The Agricultural Overlay designation would be preserved. Lands currently developed for agriculture would remain in agriculture. The maximum number of single family residential units would be 3,226, for a maximum potential number of residential units of 6,462, a reduction of 25,006 units.

This alternative has roughly equivalent amounts of commercial and industrial lands as the Recommended Alternative.

C. Alternative II: Less Intense Development Scenario

Alternative II describes a land use configuration that results in less intense development than the Recommended Alternative. Although the Less Intense Alternative designates 241 more acres for residential development than the Recommended Alternative, it results in a substantial decrease in the number of potential dwelling units, approximately 41,605 fewer units than the Recommended Alternative. The substantial difference in the number of potential dwelling units is primarily due to the assignment of different land use designations and densities in the south-central portion of the planning area. Under the Recommended Alternative, lands generally located between Monroe Street and Tyler Street are designated for Low Density Residential development. Vacant lands in this area can develop at densities of up to 4 units per acre. Under the Less Intense Alternative, however, these lands are designated for Very Low Density Residential development, and vacant lands may be developed at densities of up to only 2 dwelling units per acre. This difference in land use designations also occurs elsewhere in the planning area and substantially decreases the development potential of the Less Intense Alternative.

The Less Intense Alternative also designates fewer acres for commercial development than the Recommended Alternative. The Less Intense Alternative provides for 241 fewer acres, or about 2,309,550 fewer square feet of developable commercial space, than the Recommended Alternative. Lands designated for Tourist Commercial development in the Recommended Alternative are changed to Low and Very Low Density Residential in the Less Intense Alternative at the following locations: Eisenhower Drive at Coachella Drive, south of Avenue 52 and west of Jefferson Avenue, and the northeast corner of Avenue 54 and Madison Street.

The location and acreage of Industrial, Public/Quasi-Public, and Open Space lands are the same under the Less Intense Alternative and the Recommended Alternative.

The land use pattern established by the Less Intense Alternative is illustrated in Exhibit V-3, and a buildout land use statistical summary is provided in Table V-3.

Annexation No. 12 and Sphere of Influence Amendment

Under this alternative, most lands currently designated Low Density residential would be assigned the Very Low Density residential designation. The Agricultural Overlay designation would be preserved. Lands currently developed for agriculture would remain in agriculture. The maximum number of single family residential units would be 3,226, for a maximum potential number of residential units of 6,462, a reduction of 25,006 units.

This alternative has roughly equivalent amounts of commercial and industrial lands as the Recommended Alternative.

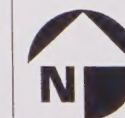
City of La Quinta General Plan (Low Density Alternative)

LEGEND

- Roads
- Township/Range Sections
- Railroads
- City Limits
- General Plan Planning Area
- City Sphere of Influence
- Residential Land Uses
 - VLDR Very Low Density up to 2 du/ac
 - LDR Low Density up to 4 du/ac
 - MDR Medium Density up to 8 du/ac
 - MHDR Medium-High Density up to 12 du/ac
 - HDR High Density up to 16 du/ac
 - Hillside Overlay
 - Agriculture Overlay
- Commercial Land Uses
 - M/RC Mixed Commercial
 - CC Community Commercial
 - NC Neighborhood Commercial
 - CP Commercial Park
 - O Office
 - TC Tourist Commercial
 - VC Village Commercial
- Other Land Uses
 - I Industrial
 - MC Major Community Facilities
 - P Park Facilities
 - OS Open Space
 - G Golf Course Open Space
 - W Watercourse/Flood Control
 - AP Airport
- P Floating Park Designation

Scale
1:31,875

0 4,000 8,000 12,000
Feet



NORTH

Riverside County Vicinity Map



Map Prepared on: July 28, 2000
Map Prepared by: Aerial Information Systems
Map Version No.: 5

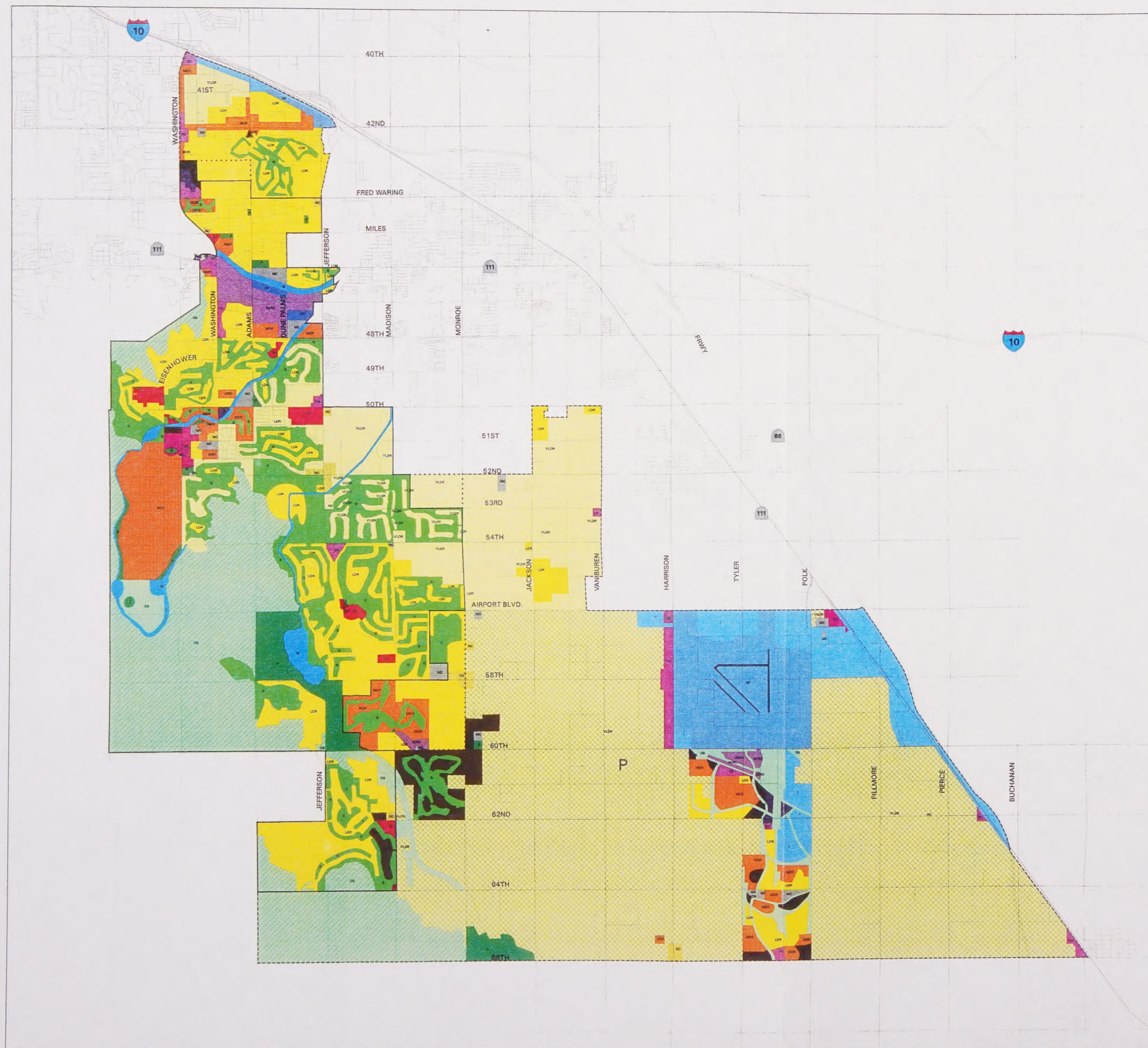
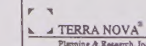


Table V-3
Alternative II: Less Intense Development Scenario
Land Use Buildout Statistical Summary

Land Use	Total Acres	Dev. Acres	Vacant Acres	Existing Units	Potential Units ¹	Buildout Units
VLDR Very Low Dens. (0-2 du/ac)	22,924	17,330	5,594	11,197*	8,391	33,067
LDR Low Dens. (2-4 du/ac)	7,121	3,844	3,277		9,831	
MDR Medium Dens. (4-8 du/ac)	2,361	1,753	608		3,648	
MHDR Medium-High Dens (8-12 du/ac)	563	351	212	944**	1,908	4,280
HDR High Dens. (12-16 du/ac)	223	104	119		1,428	
Residential Subtotal	33,192	23,382	9,810	12,141	25,206	37,347
	Total Acres	Dev. Acres	Vacant Acres	Existing Sq.Ft. ²	Future Sq.Ft. ²	Total Sq.Ft. ²
M/RC Mixed Commercial	520	197	323	1,887,890	3,095,374	4,983,264
CC Community Commercial	484	288	196	2,759,962	1,878,307	4,638,269
NC Neighborhood Commercial	194	135	59	1,293,732	565,409	1,859,141
CP Commercial Park	64	0	64	0	613,325	613,325
O Office	83	43	40	412,078	383,328	795,406
TC Tourist Commercial	278	165	113	1,581,228	1,082,902	2,664,130
VC Village Commercial	133	89	44	852,905	421,661	1,274,566
Commercial Subtotal	1,756	917	839	8,787,795	8,040,306	16,828,101
I Industrial	1,947	1,199	748	17,757,670	11,078,179	28,835,849
MC Major Community Facility	299	239	60	---	---	---
AP Airport	2,184	560	1,624	---	---	---
Public/Quasi-Public Subtotal	2,483	799	1,684	---	---	---
P Park Facilities	922	795	127	---	---	---
OS Open Space	7,902	1,713	6,189	---	---	---
G Golf Course	4,694	3,624	1,070	---	---	---
W Watercourse	602	469	133	---	---	---
Open Space Subtotal	14,120	6,601	7,519	---	---	---
Total	53,498	32,898	20,600	---	---	---

* Includes attached and detached single family housing units, as categorized by CA Dept. of Finance, 2000.

** Includes multi-family housing units from two to five-plus and mobile homes, as categorized by CA Dept. of Finance, 2000.

¹ Assumes 75% of the total number of units possible, at maximum permitted density.

** Assumes 22% lot coverage for commercial development, and 34% lot coverage for industrial development.

D. Land Use, Environmental and Service Impacts

The environmental and service issues discussed below are the same as those addressed in association with the Recommended Alternative in Section III. The following discussions address the potentially significant impacts associated with each of the three project alternatives. By comparing the land use allocations of each of the scenarios, a logical prediction of the impacts associated with buildout of each alternative can be made. Each alternative is compared to and measured against the project impacts expected to result from buildout of the Recommended Alternative.

Land Use

No Project Alternative

Buildout of the existing General Plan (No Project Alternative) is expected to result in the development of 41,934 fewer dwelling units (53% less) than buildout of the Recommended Alternative. This is primarily due to the existing General Plan's assignment of Agricultural or Very Low Density Residential land use designations in the southeasterly portion of the planning area. The continued implementation of low impact land use designations will maintain and preserve the rural, agrarian character of this portion of the planning area. However, the development potential of these lands will not be fully realized, and the level of public services available to the area will continue to be limited.

The current General Plan also provides for about 373 fewer acres of commercial lands and about 587 fewer acres of industrial lands than the Recommended Alternative. Under the current Plan, commercial uses are concentrated along Washington Street and Highway 111 in the northern portion of the planning area, with smaller pockets of Tourist Commercial and Neighborhood Commercial development scattered in the southerly portions of the planning area. Commercial land use designations in the vicinity of the Desert Resorts Airport are extremely limited and include those that would support future residential development rather than expanding airport or industrial operations.

The current General Plan designates 79 fewer acres of Public/Quasi-Public lands and about 1,763 fewer acres of Open Space than the Recommended Alternative. The majority of Open Space lands occur within the Santa Rosa and Coral Reef Mountains, as well as Lake Cahuilla and numerous golf courses in the planning area.

In summary, the existing General Plan Alternative, in comparison to the Recommended Alternative, represents a significant decrease in residential development potential, and a moderate decrease in commercial, industrial and open space lands. It is directed at maintaining the very low density, agrarian character of the southeastern portion of the planning area, the Annexation No. 12 area and the Sphere of Influence amendment area, and at concentrating commercial development along the Highway 111 corridor. Industrial development would occur primarily around the Desert Resorts Airport.

Alternative I: More Intense Development Scenario

Buildout of the more intensive land use scenario is expected to result in the development of about 18,223 more dwelling units than the Recommended Alternative, which represents a 23% increase in the number of potential units. In the annexation and SOI areas, an additional 5,845 units would be constructed, representing an increase of 19% over the Recommended Alternative. Although the More Intense development pattern is largely comparable to that of the Recommended Alternative, it removes the Agricultural Overlay in the planning area, annexation and SOI areas, thereby making all lands available for low density residential development. Furthermore, under the More Intense Alternative, Low Density Residential lands can accommodate up to 5 dwelling units per acre, which represents an increase of one dwelling unit per acre over the Recommended Alternative and results in a substantial increase in the number of potential dwelling units. Implementation of the More Intense Alternative will facilitate the conversion of all lands in this region from agriculture to low density residential, while implementation of the Recommended Alternative will allow a combination of agriculture and low density residential development.

Alternative I also provides 29 more acres of Mixed Use Commercial and Neighborhood Commercial land than the Recommended Alternative, which represents only a 1.4% increase in commercial lands. The locations and acreages of industrial, public/quasi public, and open space lands are essentially the same under both the More Intense Alternative and the Recommended Alternative.

In summary, compared to the Recommended Alternative, buildout of the More Intense Alternative is expected to result in a substantial increase in residential development and the conversion of agricultural lands to residential development in the planning area, annexation area and SOI area. Compared to the Recommended Alternative, the More Intense Alternative represents only a minor increase in commercial lands and no change in industrial, public and quasi-public, and open space lands.

Alternative II: Less Intense Development Scenario

Although the Less Intense Alternative designates about 241 more acres for residential development than the Recommended Alternative, buildout of the Less Intense Alternative is expected to result in a substantial decrease in the number of potential dwelling units. Buildout of Alternative II could potentially result in the development of about 41,605 fewer dwelling units (53% fewer units) than buildout of the Recommended Alternative for the entire General Plan area. In the annexation area and SOI area, this alternative results in 25,006 fewer units. This decrease is primarily due to the assignment of different land use designations between Monroe Street and Tyler Street. The Less Intense Alternative designates these lands for Very Low Density Residential development, which limits development densities to a maximum of 2 units per acre. The Recommended Alternative, however, designates these lands for Low Density Residential development, with densities of up to 4 units per acre. Both the Recommended Alternative and the Less Intense Alternative apply an Agricultural Overlay to lands in this area, thereby allowing existing agricultural operations to continue at the property owners' discretion.

While implementation of the Less Intense Alternative would better preserve the rural character of the southeasterly portion of the planning area, the annexation area and the SOI area, it will not take full advantage of the development potential of these lands.

Compared to the Recommended Alternative, the Less Intense Alternative represents a reduction of about 241 acres (12% fewer) of commercial development. Potential industrial development and other land use categories, including Public/Quasi-Public and Open Spaces lands, are identical under both the Recommended Alternative and the Less Intense Alternative.

In summary, when compared to the Recommended Alternative, the Less Intense Alternative represents a significant reduction in potential residential development, a moderate reduction in commercial development potential, and no change in industrial, public/ quasi-public, or open space lands.

Agricultural Resources

No Project Alternative

Buildout of the existing General Plan (No Project Alternative) would have a lower impact on agricultural resources than buildout of the Recommended Alternative. This is primarily due to the existing General Plan's assignment of Agricultural or Very Low Density Residential land use designations in the southeasterly portion of the planning area. The preservation of the County agricultural land use designation will also preserve the rural, agrarian character of this portion of the planning area. Williamson Act contracts would be preserved in perpetuity. However, the development potential of these lands will not be fully realized, and the level of public services available to the area will continue to be limited.

Alternative I: More Intense Development Scenario

Buildout of the more intensive land use scenario is expected to result in a greater impact to agricultural resources. Although the More Intense development pattern is largely comparable to that of the Recommended Alternative, it removes the Agricultural Overlay in the planning area, annexation and SOI areas, thereby making all lands available for low density residential development, without the preservation of agricultural lands offered by the Overlay. Implementation of the More Intense Alternative will facilitate the conversion of all lands to low density residential, while implementation of the Recommended Alternative will allow a combination of agriculture and low density residential development.

Alternative II: Less Intense Development Scenario

Buildout of the Less Intense Alternative is expected to result in a substantial decrease in the number of potential dwelling units. This decrease is primarily due to the assignment of different land use designations between Monroe Street and Tyler Street. The Less Intense Alternative designates these lands for Very Low Density Residential development, which limits development densities to a maximum of 2 units per acre, which is more compatible with the rural agrarian character of the area at this time. The Agricultural Overlay would be applied to lands in this area, thereby allowing existing agricultural operations to continue at the property owners' discretion.

Ultimate buildout, however, would result in the conversion of currently agricultural lands to residential, albeit very low density, land uses.

Traffic/Circulation

No Project Alternative

As described in the City of La Quinta General Plan Update Traffic Study¹, buildout of the existing General Plan is projected to generate a total of 934,182 trip-ends per day. A proportional reduction would be expected in the annexation and SOI areas. This represents 265,968 fewer trip-ends per day (22% fewer) than expected at buildout of the Recommended Alternative. Of the four project alternatives, the No Project Alternative will generate the fewest trip-ends per day and appears to be the superior alternative in this regard.

At buildout of the existing General Plan, nine roadway intersections are expected to exceed typical Average Daily Traffic (ADT) volume capacities. This represents an improvement over conditions expected at buildout of the Recommended Alternative, in which fifteen roadway intersections are expected to exceed typical ADT capacities. There would be a slight improvement in levels of service at intersections within the annexation and SOI areas.

Under the existing General Plan, no roadway segments have been identified which exceed acceptable levels-of-service (LOS). All segments are expected to operate at LOS D or better. Two of the roadway segments analyzed are expected to operate at higher levels-of-service than under the Recommended Alternative.

Alternative I: More Intense Development Scenario

The More Intense Alternative represents the most significant impacts on the circulation system with regard to Levels-of-Service, trip generation and average daily traffic volumes. It is expected to generate approximately 1,261,943 trip-ends per day, the highest trip generation rate of all four project alternatives. This represents an increase of 61,793 trip-ends per day, or about 5%, over the Recommended Alternative. The increase can be largely attributed to a corresponding increase in the potential number of single-family dwelling units.

Under the More Intense Alternative, 17 roadway segments are expected to exceed typical ADT capacities, which represents two links more than expected under the Recommended Alternative. At buildout of the More Intense Alternative, three intersections, including the following, are expected to function at LOS E during the PM peak hour: Washington Street at Hovley Lane, Jefferson Street at Country Club Drive, and Highway 111 at Airport Boulevard. Operation of intersections within the annexation and SOI intersections would be comparable to the Recommended Alternative. All other intersections are expected to function at LOS D or better. It is assumed that the same roadway improvements and classifications proposed for the Recommended Alternative in Section III will also be implemented for this alternative.

¹ "City of La Quinta General Plan Update Traffic Study (Revised)," RKJK & Associates, Inc., September 28, 2000.

Alternative II: Less Intense Development Scenario

Buildout of the Less Intense Alternative is expected to generate 1,031,147 trip-ends per day, which represents a decrease of 169,003 trip-ends per day, or about 14% fewer than the Recommended Alternative. This moderate decrease can be attributed to a decrease in the number of potential dwelling units and commercial development. Under the Less Intense Alternative, eight roadway links are expected to exceed the average daily traffic volume capacities, which represents one link less than expected at buildout of the Recommended Alternative. At buildout of the Less Intense Alternative, no roadway intersections are expected to operate below acceptable levels-of-service. A slight improvement in level of service would be expected within the annexation and SOI areas. All intersections are expected to operate at LOS D or better.

Table V-4 below provides a summary of intersection levels-of-service (LOS) anticipated at buildout of each project alternative.

**Table V-4
Comparison of Intersection Impacts
For Each Project Alternative**

Roadway Link	Recommended Alt. LOS(am/pm)*	No Project Alt. LOS(am/pm)	More Intense Alt. LOS(am/pm)	Less Intense Alt. LOS(am/pm)
Washington St. at:				
• Country Club Dr.	D/D	D/D	D/D	D/D
• Hovley Ln.	C/D	C/D	D/E	D/D
• Fred Waring Dr.	D/D	D/D	D/D	D/D
• Miles Ave.	D/D	D/D	D/D	D/D
• SR-111	D/D	D/D	D/D	D/D
• Eisenhower Dr.	D/D	D/D	D/D	D/D
• Avenue 50	D/D	D/D	D/D	D/D
Jefferson St. at:				
• Country Club Dr.	D/D	D/D	D/E	D/D
• Avenue 44	C/D	C/D	C/D	C/D
• Miles Ave.	C/D	C/D	C/D	C/D
• SR-111	C/D	C/D	C/D	C/C
• Avenue 48	D/D	D/D	D/D	D/C
• Avenue 50	C/D	C/C	C/D	C/C
Madison St. at:				
• Avenue 50	D/D	D/D	D/D	C/D
• Avenue 52	D/D	C/C	C/D	C/C

Table V-4 (cont'd)
Comparison of Intersection Impacts
For Each Project Alternative

Roadway Link	Recommended Alt. LOS(am/pm)*	No Project Alt. LOS(am/pm)	More Intense Alt. LOS(am/pm)	Less Intense Alt. LOS(am/pm)
Jackson St. at:				
• Airport Blvd.	D/D	D/D	C/D	D/D
Harrison St. at:				
• Airport Blvd.	D/D	C/D	D/D	C/D
SR-111 at:				
• Airport Blvd.	D/D	D/D	D/E	D/D
• Avenue 62	D/D	D/D	D/D	D/D

* AM and PM peak hour Levels-of-Service are provided.

Source: "City of La Quinta General Plan Update Traffic Study (Revised)", RKJK & Associates, Inc., September 28, 2000.

Soils and Geology

Given its location within a seismically active region, the City of La Quinta is expected to be exposed to potentially significant ground shaking and other geotechnical forces. The northernmost portion of the planning area and land adjacent to the Whitewater River is susceptible to wind hazards, while low-lying lands in the central and easterly portions of the planning area may be subject to liquefaction. Development adjacent to the slopes and alluvial fans of the Santa Rosa and Coral Reef Mountains is subject to potential slope instability and collapsible soils. Development throughout much of the planning area, which occurs along the shoreline of ancient Lake Cahuilla, could experience expansive soils.

The risk to life and property can be expected to be proportional to the intensity of development occurring within geotechnically unsafe areas. The level of development facilitated by the Less Intense Alternative is comparable to that facilitated by the existing General Plan. Buildout of these two scenarios would result in the least amount of urban development of the four alternatives, and therefore would be expected to expose the fewest people and structures to potential seismic and geologic hazards. Nonetheless, potential impacts from geologic and seismic hazards are expected to be largely comparable for each project alternative, given that the same construction techniques and building code requirements would be imposed on all new development.

None of the project alternatives propose development in areas which increase exposure to an unmitigatable geologic threat beyond that already identified in Section III. The four land use scenarios differ in development patterns and intensities, however each alternative maintains a low density land use plan that minimizes, to some extent, the exposure of large numbers of people to geologic risks. Each of the project alternatives designates the slopes of the Santa Rosa and Coral Reef Mountains as Open Space with a Hillside Overlay, which minimizes potential hazards associated with rockfall and slope instability. Other potential hazards in the planning area are mitigatable, and the mitigation measures set forth in Section III of this document are expected to minimize potential geotechnical impacts for all project alternatives. Detailed

geotechnical and engineering analysis would be performed prior to development, as necessary, regardless of which project alternative is implemented.

Hydrology

Because of the Coachella Valley's relative isolation from moist coastal air masses and the extreme aridity of the desert environment, the region experiences extremely low mean annual rainfall. However, the region is also susceptible to occasional severe thunderstorms, and sufficient amounts of rainfall can quickly saturate sandy soils in the planning area, thereby eliminating percolation and substantially increasing runoff.

Portions of the planning area are located within the 100-year and 500-year floodplains, as indicated on FEMA Flood Insurance Rate Maps. Capital improvements, including the La Quinta Evacuation Channel, Bear Creek Channel, East La Quinta Channel, and Coachella Valley Stormwater Channel, have been constructed to manage local runoff throughout much of the planning area. However, some developed areas within the planning area continue to be impacted by the threat of inundation. Developed lands in the vicinity of Washington Street and Eisenhower Drive, south of the La Quinta Evacuation Channel, for example, are contained within the 100-year floodplain. The 500-year flood is projected to inundate the entire Cove area, lands adjacent to the Coachella Valley Stormwater Channel north of Highway 111, and lands adjacent to the Coachella Valley Stormwater Channel in the easterly portion of the planning area.

Buildout of each of the project alternatives will result in increased runoff associated with the construction of new buildings, parking lots, sidewalks and other impervious surfaces. Future development also has the potential to alter existing drainage patterns, and in some areas, could result in the accumulation of debris during large storms. Buildout of Alternative I will result in the most intensive development and therefore is expected to generate the greatest amount of runoff. Buildout of the existing General Plan and Less Intense Alternative are expected to result in comparable levels of development and represent the least intensive impacts to the planning area. In this regard, the No Project and Less Intense alternatives appear to be the most favorable of the four project alternatives.

Nonetheless, each of the alternatives assigns a "Watercourse/Flood Control" land use designation to major floodways and channels in an effort to preserve them as open space and minimize the potential risks associated with flooding. Each of the four alternatives assigns this designation to 602 acres, so that no alternative is superior in this regard. Regardless of which alternative is implemented, the City will continue to require that 100-year stormwater flows be retained on-site. The regional backbone drainage system has been constructed, is being upgraded, or has already been designed throughout much of the planning area. Flood control improvements for the Village, including curbs and gutters and possibly storm drains, are currently in the design phase. It is assumed that additional flood control improvements will be constructed, as necessary, regardless of which project alternative is implemented. None of the four alternatives is expected to have any significant effect or advantage with regard to the efficacy of these facilities.

Water Quality/Resources

Water Consumption

Domestic water is extracted from the lower Thermal subarea of the Whitewater River Subbasin, a subsurface aquifer that underlies much of the planning area. As discussed in Section III of this document, the subbasin is currently in an overdraft condition of about 0.24% per year. The subbasin is replenished by Colorado River water that is transported to the Coachella Valley via the Colorado River Aqueduct.

The majority of the planning area is located within the service area of the Coachella Valley Water District (CVWD). The Myoma Dunes Mutual Water Company provides domestic water to the Bermuda Dunes area. Both providers utilize wells to extract water from the Whitewater River Subbasin. Most development in the south-central and southeasterly portions of the planning area is not connected to the public water delivery system and continues to rely on on-site wells.

CVWD has derived an aggregate water consumption figure of 550 gallons per day (gpd) that accounts for all water uses in the community, including residential, commercial, industrial, golf course, irrigation and other uses. This figure is useful in estimating existing and future demand for domestic water and is applied to the projected buildout population of each project alternative below.

No Project Alternative

Entire General Plan Area: Projected Water Demand = 92,652 residents x 550 gpd = 50,958,600 gpd

Annexation No. 12 and SOI Areas: Projected Water Demand = 16,140 residents x 550 gpd = 8,876,863 gpd

Alternative I: More Intense Development Scenario

Projected Water Demand = 258,084 residents x 550 gpd = 141,946,200 gpd

Annexation No. 12 and SOI Areas: Projected Water Demand = 102,611 residents x 550 gpd = 56,435,913 gpd

Alternative II: Less Intense Development Scenario

Projected Water Demand = 93,557 residents x 550 gpd = 51,456,350 gpd

Annexation No. 12 and SOI Areas: Projected Water Demand = 17,771 residents x 550 gpd = 9,773,775 gpd

As discussed in Section III, the water demand anticipated at buildout of the Recommended Alternative is estimated to be 114,383,500 gpd for the entire General Plan Area, and 47,595,350 gpd in the annexation and SOI areas. From a water consumption perspective, the No Project Alternative is the superior project alternative, closely followed by the Less Intense Alternative. Buildout of either of these two alternatives is expected to result in about 55% less water consumption than buildout of the Recommended Alternative. The More Intense Alternative represents an increase of about 24% over the Recommended Alternative.

In summary, buildout of the Recommended or More Intense Alternatives is expected to represent a substantial increase in water consumption over buildout of the No Project or Less Intense Alternatives. The mitigation measures set forth in Section III are designed to reduce potential impacts to water resources to acceptable levels, and are applicable to all four project alternatives. Regardless of which alternative is implemented, the Coachella Valley Water District and Myoma Dunes Mutual Water Company will continue to encourage and influence water conservation efforts. The use of tertiary treated water, drought-tolerant landscaping, efficient irrigation systems, and water-conserving appliances will continue to reduce the direct demand for groundwater. The groundwater replenishment program will contribute to recharge of the Whitewater River Subbasin and an overall reduction in overdraft.

Water Quality

Water quality could also be adversely affected by buildout of the proposed project alternatives. The generation of water-polluting substances is closely related to the intensity and type of development within the planning area. The construction of new roads, sidewalks, parking lots and other hardscape elements which collect and transport runoff could further increase the risk of groundwater contamination. Each of the project alternatives facilitates additional urban development and has the opportunity to introduce new pollutants into the groundwater table.

The conversion of agricultural lands to residential development in the southeasterly planning area, annexation and SOI areas as proposed by the Recommended, More Intense and Less Intense Alternatives, may have a net positive effect on groundwater quality. In the application of pesticides, herbicides, fertilizers and other chemical agents, agricultural cultivation has the potential to generate substantial amounts of groundwater pollutants. By facilitating the conversion of agricultural lands to low density residential development in this portion of the planning area, the Recommended, More Intense and Less Intense project alternatives reduce the risk associated with agricultural chemicals. In addition, existing development in the southeasterly portion of the planning area and portions of the annexation and SOI areas are not currently connected to the community sewer system and rely upon individual septic systems. The long-term use of septic systems has been associated with groundwater contamination elsewhere in the Coachella Valley in the past decade. The development of low density residences in this area will increase the demand for public services, and will likely result in the expansion of the community sewer system. The abandonment of private septic systems will further reduce the threat of groundwater contamination in this portion of the planning area.

It is important to note that none of the project alternatives proposes development that is expected to generate, discharge or dispose of significant quantities of hazardous or toxic materials. Regardless of which project alternative is implemented, the City will continue to comply with the requirements of the National Pollutant Discharge Elimination System (NPDES), encourage the expansion of CVWD's sewer system to existing and new development, and evaluate proposed projects for their potential to contaminate groundwater resources.

Biological Resources

The General Plan planning area is composed of a unique environment that supports diverse and occasionally highly specialized plant and animal communities. Terrain within the planning area varies significantly, ranging from steep, rocky slopes in the Santa Rosa and Coral Reef Mountains, to gently sloping sand fields in the north, and low-lying agricultural lands in the east. The City's unique location straddling the shoreline of ancient Lake Cahuilla also influences the presence and variety of biological resources in the area.

The existing General Plan provides for approximately 7,855 acres of Open Space in the planning area, as compared to the 7,902 acres provided by the three other project alternatives. Each of the alternatives preserves the slopes of the Santa Rosa and Coral Reef Mountains, where many sensitive biological species such as the Peninsular bighorn sheep are located, as Open Space. Each of the alternatives designates Sections 25 and 30, Township 6 South, Range 6 East, which occur within the Santa Rosa Mountains Wilderness Study Area, as Open Space. None of the alternatives entertains future development within the mountain foothills or within floodways or drainage channels.

Although the intensity of land uses and development varies to some degree between the alternatives considered, in most instances, continued development will remove native vegetation and wildlife from disturbed sites. Regardless which alternative is implemented, invasive, toxic and non-native plant species may make the remaining environment uninhabitable for native species.

The No Project Alternative and the Less Intense Alternative will likely have the greatest potential for the re-establishment of landscaped areas, including residential yards, parks and public open spaces, which may attract native plant and animal species lost to development. These two alternatives facilitate development at lower densities and intensities than the Recommended and More Intense Alternatives. They will help preserve, to some extent, the rural, agrarian character of the southeasterly portion of the planning area, the annexation and SOI areas, thereby retaining more area for landscaping, residential yards and agricultural cultivation. Although the Recommended Alternative also preserves existing agricultural operations in this area, it and the More Intense Alternative facilitate future development at higher densities and intensities. Buildout of the Recommended Alternative or More Intense Alternative will disturb more acreage and retain fewer open spaces that could be used for foraging and nesting.

Golf courses can also serve as important habitat and nesting/foraging sites for birds and small mammals. The No Project Alternative designates only 2,992 acres for golf course development, compared to the 4,694 acres proposed by the three other alternatives. This represents 1,702 fewer acres of golf course open space (36% fewer acres) than the three other alternatives, and contributes to a substantial shortage of potential, though marginal, wildlife habitat.

The mitigation measures set forth in Section III of this document can be applied to any of the four project alternatives. Regardless which alternative is implemented, the City will continue its joint efforts with surrounding jurisdictions to put into place a regional multi-species habitat

conservation plan. This effort and existing state and federal regulations will continue to affect the pattern of urbanization in the City and vicinity. The City will continue to require species-specific surveys, where necessary, to determine the presence of sensitive species prior to development, and to establish appropriate site-specific mitigation measures.

Cultural Resources

Because of its unique location straddling the shoreline of ancient Lake Cahuilla, the planning area contains one of the densest concentrations of archaeological sites in California. Cultural resources in the planning area include per-historic settlement sites associated with the Desert Cahuilla, twentieth century date palm groves, and historic buildings such as the La Quinta Hotel.

The community's cultural resources appear to be equally impacted by each of the four land use alternatives. While the intensity of development varies with each alternative, the patterns of urban development and the lands to be impacted are essentially the same. State and federal regulations regarding the identification and protection of cultural resources will remain the same, regardless of which land use scenario is implemented. The potential impacts associated with each of the alternatives are expected to be comparable to one another.

Air Quality

As demonstrated in the air quality tables in Section III of this document, and those presented below, emissions for all project alternatives are expected to exceed the SCAQMD threshold criteria. However, it is important to note that these pollutants will be emitted over the life of the General Plan, and will not be emitted in a concentrated manner at one time. Future technologies are expected to contribute to substantial reductions in pollution emissions.

As can be seen by comparing the cumulative air emissions totals for each of the four project alternatives, the No Project Alternative is expected to generate the least pollutants, closely followed by the Less Intense Alternative. The Recommended Alternative represents a moderate increase in pollutant emissions, and the More Intense Alternative is expected to generate the greatest emissions of all the project alternatives. Buildout of both the annexation area and the SOI area will contribute proportionally to these impacts.

No Project Alternative

Table V-5
No Project Alternative: Existing General Plan
Anticipated Cumulative Daily Project-Related Emissions (lbs./day)

	Stationary Source Emissions		Moving Source Emissions		Threshold Criteria*
	Power Plants	Natural Gas Consumption	Vehicles at 50 mph**	Total Pounds Per Day	Total Pounds Per Day
Carbon Monoxide	364.26	629.54	14,476.73	15,470.53	550.00
Nitrogen Oxides	2,094.48	2,993.63	2,969.59	8,057.70	100.00
Sulfur Oxides	218.55	negligible	---	218.55	150.00
Particulates	72.85	6.29	123.74	202.88	150.00
ROCs	18.21	166.83	556.80	741.84	75.00

* Threshold criteria offered by South Coast Air Quality Management District for assistance in determining the significance of air quality impacts.

** Based on EMFAC7G Traffic Emissions Model, provided by California Air Resources Board.

Source: "CEQA Air Quality Handbook," South Coast Air Quality Management District, April 1993.

Alternative I: More Intense Development Scenario

Table V-6
Alternative I: More Intense Alternative
Anticipated Cumulative Daily Project-Related Emissions (lbs./day)

	Stationary Source Emissions		Moving Source Emissions		Threshold Criteria*
	Power Plants	Natural Gas Consumption	Vehicles at 50 mph**	Total Pounds Per Day	Total Pounds Per Day
Carbon Monoxide	629.85	1,379.82	19,555.94	21,565.61	550.00
Nitrogen Oxides	3,621.63	6,171.74	4,011.47	13,804.84	100.00
Sulfur Oxides	377.91	negligible	---	377.91	150.00
Particulates	125.97	13.80	167.14	306.91	150.00
ROCs	31.49	365.66	752.15	1,149.30	75.00

* Threshold criteria offered by South Coast Air Quality Management District for assistance in determining the significance of air quality impacts.

** Based on EMFAC7G Traffic Emissions Model, provided by California Air Resources Board.

Source: "CEQA Air Quality Handbook," South Coast Air Quality Management District, April 1993.

Alternative II: Less Intense Development Scenario

Table V-7
Alternative II: Less Intense Alternative
Anticipated Cumulative Daily Project-Related Emissions (lbs./day)

	Stationary Source Emissions		Moving Source Emissions		Threshold Criteria*
	Power Plants	Natural Gas Consumption	Vehicles at 50 mph**	Total Pounds Per Day	Total Pounds Per Day
Carbon Monoxide	420.26	709.44	15,979.36	17,109.06	550.00
Nitrogen Oxides	2,416.48	3,464.79	3,277.82	9,159.09	100.00
Sulfur Oxides	252.15	negligible	---	252.15	150.00
Particulates	84.05	7.09	136.58	227.72	150.00
ROCs	21.01	188.01	614.59	823.61	75.00

* Threshold criteria offered by South Coast Air Quality Management District for assistance in determining the significance of air quality impacts.

** Based on EMFAC7G Traffic Emissions Model, provided by California Air Resources Board.

Source: "CEQA Air Quality Handbook," South Coast Air Quality Management District, April 1993.

Noise

A detailed noise impact study was prepared for the Recommended Alternative, as well as the three other project alternatives. The report is included in its entirety in Appendix E of this document, and the results are summarized below. Twenty-four roadway links in the planning area were analyzed, and CNEL noise levels at 100 feet from the roadway centerline were projected for each project alternative.

**Table V-8
Comparison of Anticipated Noise Levels
Generated by Each Project Alternative**

CNEL at 100 Feet from Centerline (dBA)				
Roadway Segment	Recommended Alternative	No Project Alternative	More Intense Alternative	Less Intense Alternative
Washington St.				
n/o Avenue 42	70.4	70.3	70.4	70.3
s/o Avenue 44	71.5	71.3	71.5	71.3
s/o Highway-111	73.3	73.0	73.3	73.0
n/o Avenue 50	70.4	70.4	70.5	70.2
n/o Avenue 52	69.0	68.8	69.1	68.2
Jefferson St.				
n/o Highway-111	68.4	68.1	68.5	67.7
s/o Avenue 48	69.9	69.3	70.0	69.0
Madison St.				
n/o Avenue 52	67.3	66.1	67.2	65.8
s/o Avenue 54	69.6	68.7	69.7	68.7
Harrison St.				
s/o Airport Blvd.	70.5	69.8	70.7	70.0
s/o Avenue 60	69.3	68.4	69.4	68.4
SR-111				
s/o Avenue 60	66.1	66.1	66.6	66.2
Avenue 44				
w/o Jefferson St.	67.8	67.6	68.0	67.7
Highway 111				
w/o Jefferson St.	70.0	70.0	70.1	69.8
Avenue 48				
w/o Jefferson St.	68.4	68.3	68.5	67.3
Avenue 50				
w/o Jefferson St.	67.2	66.9	67.3	66.6
e/o Jefferson St.	66.4	65.3	66.6	65.2
Avenue 52				
w/o Jefferson St.	68.0	67.1	68.2	66.9
e/o Madison St.	66.9	65.1	66.9	65.0
w/o Van Buren St.	66.2	64.9	66.3	65.0
Airport Blvd.				
e/o Madison St.	65.7	64.0	65.8	64.8
w/o Van Buren St.	67.5	66.2	67.7	66.8
w/o SR-111	68.4	66.7	68.9	68.1
Avenue 60				
w/o Filmore St.	62.8	61.3	64.7	62.3

Source: "City of La Quinta Noise Element Update Technical Report," RKJK & Associates, Inc. September 22, 2000

The data provided in the table above indicate that the More Intense Alternative is expected to generate the highest CNEL levels for 20 (83%) of the 24 links modeled, and is therefore anticipated to result in the greatest adverse impacts to the noise environment. The Recommended Alternative is generally expected to result in the second highest CNEL levels for the roadway segments evaluated. Noise impacts associated with buildout of the existing General Plan and the Less Intense Alternative are largely comparable to one another, and represent the lowest CNEL levels of the four project alternatives.

The table above also shows that the noise impacts associated with each alternative deviate only slightly from one another, and there is no significantly superior alternative. A comparison of the anticipated noise levels for all the project alternatives indicates that noise levels are expected to vary by less than 3 dBA (the deviation is greater than 3 for only one roadway segment: Avenue 60 west of Filmore Street). Noise increases greater than 3.0 dBA are generally audible to the human ear, and increases between 1.0 and 3.0 dBA are considered to be potentially audible. Therefore, noise impacts resulting from buildout of each of the four project alternatives, for the entire General Plan and for the annexation and SOI areas, are expected to be largely comparable. None of the project alternatives proposes a land use pattern that will be substantially impacted by regional rail or air traffic. In the SOI area, care will need to be taken to ensure that future development is not significantly impacted by noise generated at the Desert Resorts Airport under all alternatives. The Kohl Ranch project, which occurs under all alternatives, provides a buffer between the airport and sensitive receptors, by locating industrial land uses close to the airport.

Regardless which alternative is selected, traffic noise will continue to be the most significant noise source for the entire General Plan area, as well as the annexation and SOI areas. The relatively limited intensity of land uses proposed by each alternative assures limited impacts to the noise environment. Opportunities for mitigating noise impacts are essentially the same for each of the alternatives considered.

Visual Resources

Visual impacts associated with each of the project alternatives are expected to be largely the same for much of the planning area. All four alternatives preserve the visual resources of the Santa Rosa and Coral Reef Mountains by designating them as Open Space. Differences are expected to be apparent, however, in the southeasterly portions of the planning area and the annexation and SOI areas, which are currently characterized by agriculture and limited, scattered residential development.

No Project Alternative

In the southeasterly portion of the planning area and the annexation and SOI area, buildout of the existing General Plan will result in fewer adverse visual impacts than buildout of the Recommended Alternative. The existing General Plan designates a substantial portion of these lands, between Monroe and Tyler Streets, and east of Polk Street, for agriculture, with residential densities of one dwelling unit per ten acres. Limited parcels north of Airport Boulevard and east of Polk Street are designated for Very Low Density Residential, with densities of up to 2 dwelling units per acre. Under the existing General Plan, the rural character of the area will be preserved, and existing agricultural operations will continue. Vacant land will be cleared for cultivation, but will further contribute to a sense of open space. Surrounding views will remain largely unobstructed by buildings, hardscape and other elements of the built environment.

Buildout of the existing General Plan will not result in commercial development along the westerly boundary of the Desert Resorts Airport in the SOI area, or industrial development east of SR-111 in Thermal, as is permitted under the Recommended Alternative. Instead, these lands

will be developed as agriculture, and visual impacts will be limited to cleared and cultivated land and scattered residences at densities of up to one unit per ten acres.

Alternative I: More Intense Development Scenario

Implementation of the More Intense Alternative will substantially increase the level of development in the south-central and southeasterly portions of the planning area, and in the annexation and SOI areas. As discussed in Section III, the Recommended Alternative designates most land between Monroe and Tyler Streets for Low Density Residential development with an agricultural overlay, and designates the majority of lands east of Polk Street for Very Low Density Residential development with an agricultural overlay. Property owners in these areas have the option to continue existing agricultural operations or to convert their lands to low or very low density residential development. Under the More Intense Alternative, however, agricultural activity will not be permitted, and all lands will develop at densities of up to 5 dwelling units per acre. Buildout of this alternative will result in more than twice the residential development in this region than the Recommended Alternative, and will bring with it potentially significant increases in light and glare, vehicular activity, roadways and hardscape. Surrounding viewsheds may be substantially altered and/or obstructed by views of residential structures, signage and utility infrastructure.

Alternative II: Less Intense Development Scenario

Buildout of the Less Intense Alternative will result in a moderate decrease in visual impacts than the Recommended Alternative. Under the Less Intense Alternative, a substantial portion of lands south of Airport Boulevard are designated for Very Low Density Residential development, with an Agricultural Overlay. Agricultural cultivation will be permitted to continue until the property owners choose to develop. Development shall be permitted at a maximum density of 2 dwelling units per acre, which represents half the number of residences permitted by the Recommended Alternative. Potential visual impacts may include increased light and glare from residences and vehicles, and increased visual clutter such as utility infrastructure and signage. However, given that development will occur at a lower density than the Recommended Alternative, these impacts are expected to be less intrusive than those associated with buildout of the Recommended Alternative.

In summary, continued implementation of the existing General Plan will result in the preservation of agriculture in the south-central and southeasterly portions of the planning area, and in the annexation and SOI areas, and will limit visual impacts to those associated with cleared and cultivated land. Of the four project alternatives, the More Intense Alternative proposes the most significant alteration of the landscape. Buildout would result in the complete conversion of these lands from agriculture to residential and potentially significant increases in visual impacts associated with the built environment. The Recommended and Less Intense Alternatives allow for a combination of agricultural and low density residential development, thereby preserving a sense of open space while also introducing elements of the built environment.

Regardless which alternative is selected, development in the planning area will continue to occur at low densities and will continue to be limited to low-profile structures. The existing standards

and regulations set forth in the City Zoning Ordinance and other regulatory documents assure that potential impacts to the City's visual resources will be protected to the greatest extent practical.

Public Services and Facilities

Schools

Projections of student enrollment for each alternative area provided in the tables below.

**Table V-9
No Project Alternative: Existing General Plan
Potential School Enrollment**

Grade Level	Total Bldout Units	Student Generation Rate	Buildout Enrollment
K-5			
Single-Family	32,631	0.2167	7,071
Multi-Family	4,387	0.1321	580
6-8			
Single-Family	32,631	0.1012	3,302
Multi-Family	4,387	0.0474	208
9-12			
Single-Family	32,631	0.1176	3,837
Multi-Family	4,387	0.0318	140
TOTAL:			15,138

Based on Student Generation Rates provided in "Residential Development School Fee Justification Study for Palm Springs Unified School District," June 26, 1998.

**Table V-10
Alternative I: More Intense Alternative
Potential School Enrollment**

Grade Level	Total Bldout Units	Student Generation Rate	Buildout Enrollment
K-5			
Single-Family	91,323	0.2167	19,790
Multi-Family	5,852	0.1321	773
6-8			
Single-Family	91,323	0.1012	9,242
Multi-Family	5,852	0.0474	277
9-12			
Single-Family	91,323	0.1176	10,740
Multi-Family	5,852	0.0318	186
TOTAL:			41,008

Based on Student Generation Rates provided in "Residential Development School Fee Justification Study for Palm Springs Unified School District," June 26, 1998.

Table V-11
Alternative II: Less Intense Alternative
Potential School Enrollment

Grade Level	Total Bldout Units	Student Generation Rate	Buildout Enrollment
K-5			
Single-Family	33,067	0.2167	7,166
Multi-Family	4,280	0.1321	565
6-8			
Single-Family	33,067	0.1012	3,346
Multi-Family	4,280	0.0474	203
9-12			
Single-Family	33,067	0.1176	3,889
Multi-Family	4,280	0.0318	136
TOTAL:			15,305

Based on Student Generation Rates provided in "Residential Development School Fee Justification Study for Palm Springs Unified School District," June 26, 1998.

As discussed in Section III of this document, buildout of the Recommended Alternative is expected to generate a student population of about 33,268 students for the entire General Plan planning area. Anticipated enrollment under the existing General Plan and Less Intense Alternative are comparable to one another, and compared to the Recommended Alternative, they represent about a 54% decrease in potential student population. In the annexation and SOI areas, this reduction would be particularly significant, representing a loss of over 25,000 units in both the existing General Plan and Less Intense alternatives. These two alternatives appear to be the favorable project alternatives in that they will place the fewest demands on local schools. The More Intense Alternative represents an increase of approximately 7,740 students (23% increase) over the Recommended Alternative throughout the General Plan area, and is expected to result in the most significant adverse impacts on area schools. The continued payment of statutory school mitigation fees is expected to reduce project-related impacts to acceptable levels under all development alternatives.

Libraries

No Project Alternative

Continued implementation of the existing General Plan is expected to generate a total buildout population of about 92,652 residents. Applying the County's unadopted goal of 0.5 square feet and 2 volumes per capita, the City will need to provide a library with approximately 46,326 square feet of building space and 185,304 volumes.

Alternative I: More Intense Development Scenario

Buildout of the More Intense Alternative is expected to generate a population of approximately 258,084 residents. To adequately serve a population of this size, the City will need approximately 129,042 square feet of library space and 516,168 volumes.

Alternative II: Less Intense Development Scenario

Alternative II is expected to result in a buildout population of about 93,557 residents. This population will require approximately 46,779 square feet of building space and 187,114 volumes.

As discussed in Section III of this document, buildout of the Recommended Alternative will result in an estimated population of 207,970 residents. Based on the County's library standards, this population will require approximately 103,985 square feet of building space and 415,940 volumes.

The impacts associated with buildout of the existing General Plan and Less Intense Alternative are comparable to one another. Implementation of these two scenarios will require the smallest library facilities and fewest volumes. In the annexation and SOI areas, these alternatives will reduce population by over 68,000, resulting in a particularly sharp reduction in the need for additional library facilities of 137,000 square feet. Regardless, each alternative will require the expansion of library services and facilities over existing conditions, and the City will need to continue to monitor the demand for these services. The proposed General Plan sets forth specific goals, policies and programs in this regard.

Electricity

The South Coast Air Quality Management District (SCAQMD) provides electricity usage factors for residential, commercial and industrial development. Based on these usage rates, the project alternatives are expected to demand the following:

No Project Alternative: 664,770,907 kwh/year

Alternative I (More Intense Development Scenario): 1,149,473,216 kwh/year

Alternative II (Less Intense Development Scenario): 766,970,080 kwh/year

In the annexation and SOI areas, electrical demand would be significantly reduced due to the loss of over 25,000 housing units, resulting in a lowering of demand by over 140,662,500 kwh per year under the Existing General Plan and Less Intense alternatives. As discussed in Section III, the demand for electricity under the Recommended Alternative is expected to be approximately 1,042,013,553 kwh per year. Based on these projections, the No Project Alternative is expected to demand about 36% less electricity than that required at buildout of the Recommended Alternative. In this regard, it appears to be the superior project alternative. Buildout of the More Intense Alternative is expected to demand about 10% more, and buildout of the Less Intense Alternative is expected to demand about 26% less than the Recommended Alternative.

Natural Gas

Natural gas usage rates are provided by the South Coast Air Quality Management District (SCAQMD) for residential, commercial and industrial development. These factors can be used to project the monthly demand for natural gas for each of the project alternatives.

No Project Alternative: 377,724,234 cf/month

Alternative I (More Intense Development Scenario): 827,889,328 cf/month

Alternative II (Less Intense Development Scenario): 425,666,232 cf/month

In the annexation and SOI areas, demand for natural gas would be particularly reduced due to the loss of over 25,000 housing units, representing a lowering of demand of more than 166,625,000 cf/month under both the Existing General Plan and Less Intense alternatives. As discussed in Section III, buildout of the Recommended Alternative is expected to generate a demand for approximately 707,936,822 cubic feet of natural gas per month. Of the four project alternatives, the No Project Alternative is expected to consume the least natural gas, about 46% less than the Recommended Alternative. This constitutes a substantial energy savings over the Recommended Alternative, and in this regard, the No Project Alternative appears to be the superior alternative. The More Intense Alternative is expected to demand approximately 17% more than the Recommended Alternative, and the Less Intense Alternative is anticipated to utilize about 40% less than the Recommended Alternative.

Solid Waste

The following solid waste projections are based on generation rates compiled by the California Integrated Waste Management Board. They are calculated in the same manner as those for the Recommended Alternative in Section III of this document.

No Project Alternative: 131,107 tons/year

Alternative I (More Intense Development Scenario): 271,318 tons/year

Alternative II (Less Intense Development Scenario): 144,427 tons/year

As discussed in Section III, the Recommended Alternative is expected to generate approximately 234,238 tons of solid waste per year. A comparison of these figures indicates that buildout of the No Project Alternative is expected to generate the least solid waste, approximately 44% less than the Recommended Alternative. The More Intense Alternative is expected to result in about 16% more, and the Less Intense Alternative is expected to result in about 38% less than the Recommended Alternative. Given their comparatively low development intensities, the No Project and Less Intense Alternatives are expected to result in significant reductions in solid waste over the Recommended Alternative, particularly in the annexation and SOI areas.

Law Enforcement

As discussed in Section III, buildout of the Recommended Alternative is expected to result in a population of approximately 207,970 residents, and will require about 208 police officers.

No Project Alternative

Buildout of the existing General Plan is expected to result in a population of approximately 92,652 residents. To maintain a target ratio of 1 law enforcement officer per 1,000 residents, the City will need to a total of 93 officers. Compared to the Recommended Alternative, this represents a reduction of 115 officers, or about a 55% reduction in staffing demands.

Alternative I: More Intense Development Scenario

Alternative I is expected to result in a buildout population of about 258,084 residents, which will require about 259 police officers. Compared to the Recommended Alternative, this represents a 25% increase in the demand for police officers.

Alternative II: Less Intense Development Scenario

Buildout of Alternative II is expected to generate a population of 93,557 persons. At a rate of 1 officer per 1,000 residents, Alternative II will require about 94 police officers, approximately 114 fewer officers (55% less) than the Recommended Alternative.

Based on police staffing criteria, the No Project and Less Intense Alternatives appear to be the favorable alternatives in that they are expected to require smaller police forces. This will be particularly true in the annexation and SOI areas, where population will be reduced by over 68,000 under either alternative. Nonetheless, the mitigation measures set forth in Section III are expected to adequately reduce project-related impacts, regardless of which alternative is implemented.

Fire Protection

Buildout of either project alternative will increase the demand for fire personnel and fire protection services over existing levels. However, given the relatively high level of development facilitated by the More Intense Alternative, particularly in those areas of the planning area currently in agriculture, the More Intense Alternative is expected to generate the greatest demand for additional fire protection services. Buildout of the existing General Plan is expected to place the least demands on fire protection personnel, considering that it designates much of the southeasterly planning area as agriculture, with very little structural development. The goals, policies and programs set forth in Section III are expected to adequately address the need for additional fire protection for all project alternatives.

Socio-Economic Resources

No Project Alternative

Buildout of the existing General Plan will add an estimated 24,877 new dwelling units to the planning area. Based on an average household size of 2.75 persons per household, the City's population is expected to increase by about 68,412 new residents. When combined with the City's existing population of 24,240 people, this results in a total estimated buildout population of 92,652 residents, which represents 115,318 fewer residents (55% less) than are expected at buildout of the Recommended Alternative. The following table provides a cost/revenue analysis for buildout of the No Project Alternative. Estimates were derived in the same manner as those for the Recommended Alternative in Section III.

**Table V-12
No Project Alternative
Buildout Cost/Revenue Analysis**

Item	Annual City Cost	Annual City Revenue
General Administration & Services	\$58,278,108	
Residential Property Tax Revenues		\$28,418,225
Commercial Property Tax Revenues		\$3,696,240
Industrial Property Tax Revenues		\$3,273,098
Sales Tax Revenues		\$33,305,472
Transient Occupancy Tax Revenues		\$17,217,444
Motor Vehicle In-Lieu Fees		\$3,593,045
Subtotal:		\$89,503,524
Resulting Annual Positive Cash Flow:	\$31,225,416	

Table V-12 above indicates that buildout of the current La Quinta General Plan could result in a positive cash flow of about \$31.2 million annually. This is largely due to limitations in the number of potential future dwelling units, which limits the potential buildout population size and the associated demand for City services. In the annexation and SOI areas, where a total of 25,599 units would not be constructed, resulting in 70,397 fewer residents, the lower population would represent a much lower generation of need for administrative services.

Alternative I: More Intense Development Scenario

Buildout of the More Intense Alternative is expected to result in a total population of 258,084 residents², which represents a 24% increase over the population anticipated at buildout of the Recommended Alternative. This alternative facilitates the development of 85,034 new dwelling units, which would increase the planning area's total housing stock to 97,175 units. A cost/revenue analysis for the buildout of Alternative I is provided in the table below.

In the annexation and SOI areas, this alternative increases population by 16,074 persons, which will proportionally increase the demand for services.

² Based on 85,034 potential new dwelling units, an average household size of 2.75 persons per household, and an existing City population of 24,240 residents.

Table V-13
Alternative I: More Intense Alternative
Buildout Cost/Revenue Analysis

Item	Annual City Cost	Annual City Revenue
General Administration & Services	\$162,334,836	
Residential Property Tax Revenues		\$83,195,535
Commercial Property Tax Revenues		\$4,611,197
Industrial Property Tax Revenues		\$4,685,826
Sales Tax Revenues		\$46,788,582
Transient Occupancy Tax Revenues		\$22,022,596
Motor Vehicle In-Lieu Fees		\$10,008,498
Subtotal:		\$154,199,227
Resulting Annual Cash Flow:	- \$8,135,609	

As shown in the table above, buildout of the More Intense Alternative is expected to result in negative fiscal impacts to the City of more than \$8 million annually. This is largely due a land use pattern that facilitates a substantial number of new, future dwelling units and therefore results in a relatively large City population. The costs of providing governmental and other public services to a population of this size are expected to outweigh the economic benefits.

Alternative II: Less Intense Development Scenario

Buildout of the Less Intense Alternative is expected to result in the development of approximately 25,206 new dwelling units. When combined with the number of existing housing units, this alternative could generate a total housing stock of 37,347 units. With an average household size of 2.75 persons per household, buildout of the Less Intense Alternative could generate approximately 69,317 new residents in the planning area. When combined with the existing population of 24,240 residents, the Less Intense Alternative could result in a total buildout population of approximately 93,557 residents. In the annexation and SOI areas, where a total of 25,006 units would not be built, the resulting reduction in population of 68,767 persons would have a proportionally significant impact in lowering the need for services in this area, similar to those resulting from implementation of the Existing General Plan.

Potential costs and revenues associated with buildout of the Less Intense Alternative are illustrated in the table below.

Table V-14
Alternative II: Less Intense Alternative
Buildout Cost/Revenue Analysis

Item	Annual City Cost	Annual City Revenue
General Administration & Services	\$58,847,353	
Residential Property Tax Revenues		\$28,717,803
Commercial Property Tax Revenues		\$3,996,674
Industrial Property Tax Revenues		\$4,685,826
Sales Tax Revenues		\$44,298,558
Transient Occupancy Tax Revenues		\$16,408,312
Motor Vehicle In-Lieu Fees		\$3,628,140
Subtotal:		\$101,735,313
Resulting Annual Positive Cash Flow:	\$42,887,960	

The table above illustrates that buildout of the Less Intense Alternative could result in a substantial positive cash flow to the City. Like the No Project Alternative, this is largely due to a land use pattern that limits the number of potential dwelling units and therefore results in a relatively small buildout population and limited costs for the provision of City services. Revenues from property taxes, sales taxes, transient occupancy taxes and other sources are expected to exceed the costs associated with providing public services by more than \$42 million annually.

CITY OF LA QUINTA

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VI. SHORT-TERM USE VERSUS LONG-TERM PRODUCTIVITY

This section of the EIR addresses the long-term effects of the proposed General Plan, annexation and sphere of influence amendment by reviewing the relationship between the local short-term uses of the environment and the maintenance and enhancement of long-term productivity. Special consideration has been given to those areas of impact which limit the range of beneficial uses of the environment or which pose long-term risks to health and safety, including geophysical conditions, biological resources, scenic visual resources, air resources, noise environment, and water resources. Why the proposed General Plan, annexation and sphere of influence amendment are believed to be justified for adoption and implementation at this time, rather than delaying their adoption to consider additional alternatives not addressed in this EIR, is incorporated into this discussion.

Geophysical Conditions

As discussed in Sections III-D and IV of this EIR, the City of La Quinta is subject to significant geotechnical forces associated with steep terrain and seismically induced conditions. The continued urbanization of the City, General Plan planning area, annexation and SOI areas, even at relatively low densities and intensities, can be expected to result in the exposure of greater numbers of residents, workers, visitors and shoppers to geotechnical hazards of potential significance. In order to assure the continued safety of residents and visitors, and protect property from geologic hazards, the City relies upon and enforces the provisions and requirements established by a variety of relevant regulatory mechanisms. These include the Alquist-Priolo Earthquake Fault Zoning Act, Title 24 of the California Administrative Code, the Uniform Building Code, the International Building Code and the Hillside Conservation Zone ordinance. While these measures help to reduce geological hazards, impacts from major seismic events are generally severe and cannot be completely planned for or mitigated. These hazards will continue to be a threat to people and property within the planning area and are considered long term impacts.

Air Resources

As discussed in Section III of this document, air quality is a non-localized issue that is affected by a variety of pollutants generated both locally and from areas outside the Coachella Valley. As the City and region continue to develop, it is expected that higher levels of pollutants emitted from increased traffic, urban development and energy and power consumption will be added to the Valley's air basin, further degrading regional air quality. Locally increased emissions will result in higher concentrations of reactive organic gases and particulates. Local production of ozone is expected to increase in the future since conditions required for its generation occur in the Coachella Valley.

The continued use of gasoline and diesel fuels in vehicles, and the burning of natural gas, contribute to the generation of oxides of nitrogen and reactive hydrocarbons that degrade local air quality to a greater or lesser extent, depending on rates of dispersion. While continued urban development will increase the emissions of fugitive dust, these increases are expected to be temporary and disturbed sites will be permanently stabilized with structures, pavement and landscaping. While the General Plan policies and programs direct the regulation of emissions, especially those in close proximity to sensitive receptors, these impacts cannot be completely removed. Further, without a radical change in methods of transportation and combustion technology, reductions in emissions on a unit of energy basis will not be seen in the near-term.

Water Resources

As discussed in Sections II and III of this document, the primary aquifer serving the Valley is in an overdraft condition.. This condition has lowered the depth to groundwater in the Whitewater River Subbasin and in the lower Thermal Subarea underlying the planning area. While water from the Colorado River has been secured to recharge basins in the upper Thermal Subbasin to recharge the aquifer, the allotment to be provided may not be sufficient to off-set future overdraft. However, this recharge is expected to limit the impacts of current demand at this time.

As the Valley continues to grow and develop, overdraft rates are likely to become more severe unless more stringent conservation methods are implemented and additional sources of recharge are secured. The Draft General Plan includes policies and programs to encourage the conservative use of water resources for domestic and landscape uses and encourages the use of native drought resistant planting materials. Nonetheless, with California periodically in a drought condition, expected reductions in available Colorado River water and the sources of recharge water being directly affected, the availability of domestic water resources will continue to be a constraint, albeit a limited one, on future development.

Biological Resources

Continued development in the planning area will result in the conversion of lands resulting in the loss of habitat, fragmentation and degradation. As lands develop, the clearing and grading of land and the construction of improvements will result in the continued loss of wildlife habitat on the valley floor and in those foothill and upper alluvial fan areas where development is still permitted.

The proposed General Plan, annexation and sphere of influence amendment do exclude development in many sensitive areas, and substantially limits the density and intensity of development permitted overall. However, buildout of the City will degrade or remove significant areas of stabilized and field habitat and other habitat types located within the City and planning area boundaries.

Continued development of the City will also impact habitat of Coachella Valley Fringe-toed lizard, flat-tailed horned lizard, Little San Bernardino Mountains gilia, burrowing owl, Palm Springs pocket mouse, the Palm Springs round-tailed ground squirrel, as well as sensitive species, and may result in the legal taking of individual animals. Federal and state agencies are currently working with the Coachella Valley Association of Governments, the County and Coachella Valley cities, as well as the Santa Rosa Mountain Conservancy, on a broadly based Multiple Species Habitat Conservation Plan to protect a broad range of species and their habitat.

In the meantime, the City shall adhere to applicable management protocol for investigating impact potential and mitigation. Where state and/or federal listed species are identified, appropriate incidental take permits and associated mitigation measures will be required before development will be permitted. Overall, the loss and degradation of foraging habitat and the continued pressure of human activity on local biological resources will all contribute to the long-term reduction of plant and animal species, habitat and biological diversity.

Scenic/Visual Resources

Scenic and visual resources of the City are one of its most important assets. The combination of unique mountain formations and low desert environments combine to create a setting that attracts visitors and new residents from all over the country. These resources will be affected by continued development within the City's boundaries but only to a limited extent. The General Plan policies and programs provide for appropriate development criteria and assure the review of development proposals with the potential to have adverse impacts on scenic resources. The General Plan also provides for the preservation and integration of elements of the desert landscape into urban design, and the provision on native and other drought-tolerant vegetation within new development. Development throughout the General Plan planning area, including the annexation and sphere of influence amendment areas, will be required to meet these standards. Nonetheless, the clearing and grading of lands and the construction of roads and structures will all contribute to the long-term impacts to visual resources.

The first part of the paper discusses the importance of the research and the objectives of the study. It then proceeds to a literature review, followed by a description of the methodology used. The results of the study are presented in the next section, followed by a discussion of the findings and their implications. The paper concludes with a summary of the main points and a list of references.

The second part of the paper discusses the importance of the research and the objectives of the study. It then proceeds to a literature review, followed by a description of the methodology used. The results of the study are presented in the next section, followed by a discussion of the findings and their implications. The paper concludes with a summary of the main points and a list of references.

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VII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF ENVIRONMENTAL RESOURCES

In accordance with CEQA, it is required that the EIR address the utilization of non-renewable resources in the course of development and the continued use of these limited resources once development has been completed. While non-renewable resources usually imply energy resources, they can also refer to biological resources and the permanent loss of visual resources.

Future development of the City of La Quinta planning area under the proposed General Plan, the annexation area and the sphere of influence amendment area will result in the irreversible and irretrievable commitment of the following renewable and non-renewable natural resources: open land, energy resources (natural gas, oil and other fossil fuels), water, construction materials (lumber, gravel, sand, asphalt, and metals), minerals, and biological resources.

The proposed General Plan will not have a significant, unmitigatable direct impact on sensitive and/or non-renewable environmental resources. The continued consumption of natural gas and electrical energy will contribute to be the on-going depletion of fossil fuel resources. The cumulative use of fossil fuels may result in the ultimate loss of an important source of chemical and material feed stocks, which will not be retrievable once consumed. Buildout of the General Plan, annexation and SOI amendment areas will include grading and the removal of native vegetation and wildlife in all or portions of development sites. The irretrievable loss of habitat and other biological resources will result from this future development. Further development will irreversibly change the viewsheds of the community and may reduce the quality of the open space environment as development continues. Nonetheless, the relatively low densities and land use intensities, and the regulatory framework created by the General Plan to conserve and protect valued resources will significantly reduce long-term impacts to these resources.

It is expected that, over time, urban development will have less of an impact on finite resources than is expected today. This is likely to be true for such resources as fossil fuels and other finite mineral resources. The impacts of development on other natural resources, including open space lands and biological resources, are expected to be limited by the urban limits established by the General Plan and the designations imposed on lands within the General Plan planning area, annexation area, and sphere of influence amendment area. The Plan describes the long-term limits of urban development in this portion of the Coachella Valley.

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VIII. GROWTH INDUCING AND CUMULATIVE IMPACTS

A. Growth Inducement

The proposed land use scenario (Recommended Alternative) for the City of La Quinta General Plan, or that proposed for the annexation area or sphere of influence (SOI) amendment will not overtly or significantly induce growth or change the physical conditions in the planning area, but will incrementally increase growth-inducing impacts over the long-term, especially in the southeast portion of the planning area. The General Plan Recommended Alternative is expected to maintain and enhance the City's low-density resort residential character, while still providing opportunities for continued growth in all sectors of the economy.

Over the long-term, the proposed Plan has the potential to change the existing agrarian character of the southeasterly portions of the planning area, the annexation area and the SOI amendment area, and will increase growth-inducing impacts in this region. In an effort to address this potential, the Plan applies an Agricultural Overlay to lands generally between Monroe Street and Tyler Street, as well as to lands east of Polk Street. This overlay provides a recognition of a continued right to agriculture, while also giving property owners the option of pursuing low-density residential uses. Lands in this area will become available for Low Density Residential development, with maximum densities of 4 units per acre (maximum of 2 units per acre east of Polk Street).

At this time, it is not possible to predict whether or to what extent these lands will actually develop as residential uses, or to what extent agricultural operations will be preserved. Nonetheless, over the long-term, the proposed General Plan is expected to facilitate at least the partial conversion of these lands and the migration of new residents into the community. Depending upon the extent and rate of development that occurs, the development of new

residences could have a modest to moderate job creation effect, primarily in the areas of construction, commercial and professional services, utility installation, landscape maintenance, and so on. The demand for additional public roadways is expected to be limited, given that the area is easily accessed by an existing network of roads, and is directly connected to other Coachella Valley communities by SR-111 and SR-86. However, the widening of existing roadways can be expected to facilitate increased traffic volumes. Continued growth in the area is expected to increase the demand for and result in the extension of community sewer and water delivery systems and other public infrastructure and services, which could induce further growth. The demand for durable goods and employment opportunities will increase, and could have a modest to moderate effect on the growth of the local economy.

The potential conversion of agricultural lands in this portion of the planning area, as made possible by the proposed General Plan, is consistent with and is an extension of existing development trends in the immediate vicinity. Numerous resort residential and mixed use developments, including PGA West, Village at The Palms and Kohl Ranch, have been approved and/or developed in this portion of the planning area by either the City or Riverside County in recent years. By designating lands in the south-central and southeasterly portion of the planning area for agriculture and low density residential development, the proposed General Plan, annexation or SOI amendment do not, in and of themselves, provide the impetus for urbanization, but make possible the continuation of this already existing trend.

Growth-inducing impacts will be controlled and restricted, to some extent, by physical and policy-related constraints. The Santa Rosa Mountains, which are designated as undevelopable Open Space under the proposed General Plan, will function as a barrier to development on the west. Numerous General Plan goals, policies and programs set preservation of the City's low density resort residential character and its natural resources as a high priority, which will further limit development intensities and, therefore, associated growth inducement. Other pending issues, including the Coachella Valley Multi-Species Habitat Conservation Plan and water conservation, will create limitations on the potential for growth in the planning area.

B. Cumulative Impacts

The implementation of the La Quinta General Plan, and the buildout of the annexation and SOI areas, will result in impacts that must be considered in conjunction with the effects of other development and which may take place outside the planning area and the City's jurisdiction. Under CEQA, these are called cumulative impacts (Section 21083(b), CEQA Statutes, and Section 15355 of the CEQA Guidelines).

While adoption and implementation of the proposed General Plan and annexation will control and regulate development within the existing and future incorporated boundaries of the City, the General Plan will have only an indirect moderating effect on development outside the City. The General Plans of Indio, Coachella and Palm Desert, as well as the Riverside County General Plan/Eastern and Western Coachella Valley Community Plans promote development densities and intensity in some areas which generally appear to be compatible and consistent with resource and infrastructure constraints predominant in the area. As mentioned in section A above, the need for water conservation and wildlife habitat preservation will have moderating effects on all Coachella Valley communities. These constraints can be expected to be a moderating influence on maximizing potential land use intensities permitted under other jurisdictions' general plans.

Most lands within the City's boundaries are privately owned. However, public lands controlled by the Bureau of Land Management, Bureau of Reclamation, Coachella Valley Water District and others, within and adjacent to the City boundaries, further constrain development and limit cumulative impacts. These include the Santa Rosa and Coral Reef Mountains, which include most of the City's western and southwestern boundary, and the Fish Traps archaeological site, located at the southerly boundary of the planning area and under the jurisdiction of Riverside County. Clearly, these lands will not be developed to more intensive levels than lands within the City, and they are likely to remain undeveloped.

Land Use Compatibility

Cumulative land use impacts associated with the proposed General Plan, annexation and SOI areas are primarily associated with the potential for the continued conversion of desert open space and agricultural lands to urban uses, and continued urban growth in the surrounding area. The potential conversion of agricultural lands is consistent with current development trends in the immediate vicinity. The General Plan includes policies that recognize the value and importance of agricultural lands, and the rural lifestyle enjoyed by residents in this area.

An increase in population adjacent to vacant lands could result in increased illegal dumping, the use of off-road vehicles or other conflicting land uses. Avoiding these problems will require attentive code enforcement by the City, Riverside County, Bureau of Land Management (BLM) and other responsible agencies. Furthermore, the various jurisdictions of the Coachella Valley are in the process of developing a comprehensive Multiple Species Habitat Conservation Plan (MSHCP), which is expected to extend long-term protection to a variety of lands in the valley. No significant cumulative impacts or land use incompatibilities are expected to result from the adoption and implementation of the La Quinta General Plan, or with annexation No. 12 and the concurrent sphere of influence amendment.

Traffic/Circulation

Buildout of the proposed General Plan, annexation area and SOI amendment area will generate an increase in local and regional traffic that, when combined with existing and future regional background traffic, could represent a significant cumulative impact on the local roadway system. As discussed in Section III of this EIR, the La Quinta General Plan traffic/circulation analysis was based upon the regional transportation model developed by the Coachella Valley Association of Governments (CVAG) and the Southern California Association of Governments (SCAG). Traffic was analyzed considering both intra-city and regional existing and future traffic, including that associated with buildout of the entire General Plan planning area, which includes both the annexation and SOI areas. Fifteen roadway segments in the planning area were identified as potentially operating at levels that exceed roadway capacity. Those roadways expected to be most adversely impacted by buildout of the planning area, and from growth in background traffic generated by development in other jurisdictions, include Washington Street between Avenue 44 and Avenue 48, and various segments of Highway 111. These segments and key intersections in the planning area will require on-going monitoring to assure that adequate design geometry improvements and upgrades are provided to allow traffic to function acceptably.

The development and implementation of Transportation Demand Management (TDM) techniques, the increased use of alternative modes of transportation, and the use of traffic congestion management strategies should contribute to an improvement in roadway functioning as the planning area builds out. General Plan policies and programs include the integration of the above mentioned transportation demand management programs, an on-going intersection

monitoring program, and a variety of roadway and intersection improvements. Nonetheless, with the inclusion of growth in background traffic consistent with regional traffic projections, buildout of the planning area under the proposed General Plan could result in significant cumulative impacts associated with traffic and the local circulation system. Levels-of-service on existing roadways will continue to decrease as development within the City and Coachella Valley continues. Ongoing coordination with local and regional jurisdictions will help to further limit cumulative impacts on regional transportation systems.

Hydrology

While future construction of residential, commercial and other types of development can be expected to contribute to runoff generated in the entire planning area, and may require the construction of additional drainage facilities, impacts are expected to be limited by the low land use intensities and the implementation of General Plan policies and programs which reduce runoff and enhance percolation. Furthermore, the City is actively planning the construction of additional all-weather crossings and stormwater facilities that will convey runoff in the Village. The proposed Plan includes requirements for the construction of on-side stormwater retention facilities, which will further reduce runoff volumes and the cumulative effects from continued buildout of the City. The annexation area will be subject to the City's standards, and can be expected to develop in a similar manner. When and if the SOI amendment area is ultimately annexed, it too will be subject to these requirements. Implementation of the General Plan is not expected to significantly increase potential cumulative impacts of stormwater runoff, and is not expected to have a considerable or significant cumulative impact on the major drainage facilities serving the area.

Geology/Seismicity

Buildout of the planning area will result in continued urbanization in a seismically active region, as well as the location of more people into an area with the potential for strong ground acceleration. Although the planning area does not contain any known active or potentially active faults, potential ground motions in the planning area and throughout the Coachella Valley have been known to cause severe damage to structures, roadways and other elements of the built environment.

The buildout of the proposed General Plan, annexation and SOI results in increases in the potential number of dwelling units, commercial and industrial land, and the number of people potentially exposed to seismic hazards, including those associated with liquefaction. Development within the planning area shall be required to be designed in accordance with the policies and programs of the General Plan, recommendations of the geotechnical consultant, and seismic requirements of the Uniform Building Code and/or International Building Code. No significant cumulative impacts associated with geotechnical hazards are expected to result from adoption and implementation of the proposed La Quinta General Plan, buildout of the annexation or buildout of the SOI, if the appropriate design and engineering precautions are implemented in future development.

Water Resources

Given the aridity of the desert environment, the demand for water in the Coachella Valley is as high or higher than in other areas of Southern California. The City is largely reliant on groundwater to serve the community's domestic water needs, although Canal water meets some of the community's needs for landscape irrigation. With the significant growth that has taken place over the past twenty years, the aquifer that serves the City and other communities in the valley is now in an overdraft condition. Imported Colorado River water currently supplements

natural groundwater supplies and helps reduce the rate of overdraft for aquifers to the north. The Coachella Valley Water District has been developing a program to recharge the groundwater basin serving much of the planning area. A comprehensive recharge program is expected to begin within the next two years.

Continued urbanization of the planning area will contribute to a long-term, incremental increase in the demand for groundwater. Through the continued implementation of Title 24 conservation measures, the widespread use of native and other drought-tolerant plant materials, the use of Canal and tertiary treated water in golf course and landscaping irrigation, and other water conservation methods, cumulative impacts to water resources can be effectively reduced. General Plan policies and programs are expected to enhance the water conservation efforts of the CVWD, and Myoma Dunes Mutual Water Company.

The City shall work cooperatively with CVWD, through the implementation of the General Plan and the CVWS Water Management Plan, to address the problems of supply and potential groundwater contamination associated with the continued reliance of portions of the community on on-lot septic systems. The General Plan sets forth policies and programs to require the connection of existing and future development to sewage collection systems whenever possible. The proposed Plan provides for relatively low residential densities, and limited industrial development in the planning area, and therefore limits anticipated cumulative impacts associated with water supply and quality.

Biological Resources

The proposed La Quinta General Plan constitutes a limited increase in acreage assigned an “Open Space” land use designation. It also incorporates policies and programs that encourage the preservation of major washes and drainages as natural wildlife corridors and enhanced habitat, consistent with their function as drainage facilities. Furthermore, the City has adopted a Hillside Conservation Ordinance designed to protect mountainous slopes from encroaching development. Nonetheless, on a regional scale, the loss of vegetation from future development must be viewed as an incremental contribution to the loss of habitat and associated wildlife. The encroachment of man into undeveloped desert land reduces open space, the availability of foraging habitat, the availability of large “home ranges” for predators, and the potential reduction in biodiversity..

Continued clearing and development of land within the planning area and its vicinity could result in cumulative adverse impacts with regard to the following: (1) reduction in foraging territory for ranging species, (2) disruption of species’ migration patterns, (3) creation of isolated sub-populations, and (4) restriction in “gene flow” between existing sub-populations. The preservation of washes, canyons, and steep mountainous terrain within the planning area for use as potential movement and migration corridors will limit cumulative regional disruption of wildlife movement. General Plan policies and programs include the integration of open space areas and wildlife corridors into major development design and future area-wide planning efforts.

Potential cumulative impacts to biological resources are also expected to be further reduced by the completion and implementation of the Coachella Valley Multiple Species Habitat Conservation Plan, which is expected to address the planning area. Inasmuch as sensitive species currently occur within the planning area, development proposals will be required to adequately mitigate impacts to wildlife and habitat before development is permitted. Within the physical and regulatory context of the Plan, no significant cumulative impacts associated with biological

resources are expected to result from adoption and implementation of the proposed La Quinta General Plan.

Cultural Resources

Due to the City's unique location straddling the shoreline of ancient Lake Cahuilla, an abundance of Native American cultural resource sites have been identified in the planning area, including evidence of prehistoric settlements, wells and trails. Although nearly 50% to 60% of the planning area has been surveyed for cultural resources since the 1970s, the potential for discovering additional archaeological sites exists, particularly in canyons, alluvial fans, sand dunes and mountainous slopes, which have been shown to contain ancient trails, rock cairns and other evidence of prehistoric occupation. Potential impacts associated with continued development include disturbance or destruction of cultural resources due to grading, site excavation, construction and increased foot and vehicular traffic.

The proposed La Quinta General Plan includes policies and programs directed at reducing potential impacts to sensitive archaeological and historic areas. The Plan limits development within potentially sensitive areas, including mountainous terrain, canyons and drainages, and requires that detailed site surveys be conducted on future development sites, as necessary, to determine the presence and significance of archaeological and historic resources. The City has taken a proactive approach to assuring that cultural resources within its boundaries are adequately surveyed, documented and preserved, where appropriate. The City has also adopted a Historic Preservation Ordinance, established a Historic Preservation Commission, and drafted procedures for the designation of landmarks and historic districts. The General Plan encourages the continued development of programs by the City and private organizations to identify, designate and preserve important historical sites and resources. No significant cumulative impacts associated with archaeological or historic resources are expected to result from adoption and implementation of the proposed General Plan, or buildout of the annexation and SOI areas, provided the appropriate precautions are implemented in future development.

Air Quality

Buildout of the planning area, as proposed under the Recommended Alternative, is expected to result in impacts to regional air quality that could be considered cumulatively significant. Although largely originating from outside the community, the increased generation of electricity from fossil fuels, at least in the near to mid term, may have adverse impacts on the Southeast Desert Air Basin and the Coachella Valley. Levels of carbon monoxide, exhaust hydrocarbons, and oxides of nitrogen and sulphur will also contribute to the degradation of regional air quality. Suspended particulates and ozone have been identified as pollutants of greatest concern in the Coachella Valley. Fugitive dust (PM₁₀) generation is largely a local condition and will require the continued application of development controls and soil stabilization techniques, consistent with regional, state and federal regulation, to effectively reduce these impacts. Emissions related to traffic generated in the planning area is expected to further contribute to the degradation of local and regional air quality.

Regional and local strategies are currently being developed and implemented to reduce these impacts. Policies and programs set forth in the proposed La Quinta General Plan, including the implementation of transportation demand management and congestion management strategies, will, to some extent, control local contributions to air quality degradation. Nonetheless, when combined with existing and future emissions from neighboring communities and air basins to the west, buildout of the planning area as proposed under the Recommended Alternative could constitute a significant cumulative impact to air quality degradation.

Noise

The additional population and traffic that are anticipated at General Plan buildout will incrementally contribute to a cumulative rise in noise levels in the City and immediate vicinity. Although increases in noise levels will result from future development, the overall quiet, suburban noise environment is not expected to appreciably deteriorate if policies, programs and mitigation measures provided in the General Plan are implemented. The most significant impacts will occur as a result of increased traffic volumes. Naturally, the most impacted areas will be those adjacent to roadways that are projected to carry the highest traffic volumes. The construction of commercial structures and the use of large mechanical systems will introduce other potentially significant noise sources to the community.

As set forth in General Plan policies and programs, potential noise impacts shall be considered in the application review process for all proposed projects within the City and annexation area. Factors to be considered will include the strategic placement of acoustical barriers such as masonry walls, the arrangement of attached housing to provide necessary shielding of outdoor living areas, and the incorporation of additional setbacks from roadways. Where necessary, future development within the planning area will be required to conduct acoustical analyses to properly identify project-related noise impacts, and specific mitigation measures which reduce identified impacts will be required. General Plan policies and programs include community noise standards, compliance monitoring, land use reassessments, and other actions which control and minimize impacts to the community noise environment. No significant cumulative impacts associated with noise generation are expected to result from adoption and implementation of the La Quinta General Plan.

Landform Alteration/Visual Resources

As discussed in Sections II and III of this document, visual resources, including mountains and associated vegetation, are important and valuable resources of the City and surrounding communities. The combination of unique mountain formations and low-lying desert lands creates a setting that is the essence of the community's character. These resources will be affected by continued development in the planning area, including the incremental conversion of agricultural lands to residential uses in the planning area, annexation area and SOI area.

The proposed General Plan includes measures that require the thoughtful review and analysis of development impacts on mountain viewsheds and other scenic resources. The Plan also provides for the preservation and integration of elements of the desert landscape into urban design, and the provision of native and other drought-tolerant vegetation within new development. The City has also adopted a Hillside Conservation Zone Ordinance, which will further regulate development proposed within and adjacent to the Santa Rosa and Coral Reef Mountains. Nonetheless, the clearing and grading of lands and the construction of roads and structures will all contribute to long-term adverse impacts to visual resources.

Public Services and Facilities

Additional development facilitated by the proposed General Plan, and buildout of the annexation and SOI areas will cumulatively contribute to increased demands upon all of the community's public services and facilities. Given the extremely high summer temperatures in the desert, the demand for electrical energy in the Coachella Valley is comparable to, if not higher than other areas of Southern California. The construction of energy-efficient buildings and the expanded use of non-polluting energy systems can significantly reduce the cumulative demand for energy.

Increases in population have a direct impact on landfill capacities, and identifying new landfill sites has become an increasingly important issue in the Coachella Valley. The proposed General Plan calls for aggressive waste minimization and recycling programs which can greatly reduce this cumulative impact. Regionally coordinated recycling programs will help preserve resources and reduce the amount of material being deposited in landfills.

Governmental services in the City will experience the cumulative impacts of increased population and possible disproportionate revenue generation. At city, county and state levels, public services are experiencing considerable cumulative impacts as the State population continues to increase at a faster pace than the generation of operational revenues. Public schools, in particular, are subject to increasing pressures associated with urban development. Developer fees and assessment districts help to reduce direct and cumulative impacts on public services. Development in the planning area is expected to provide adequate revenues to support the provision of necessary public services and facilities.

Socio-Economic Resources

The proposed General Plan has been developed to allow the City to maximize its economic development potential, while establishing a balanced and secure financial future. It provides mechanisms that help diversify the local economy and examines a broad range of commercial and industrial development opportunities, including tourism, restaurants, general commercial activity, warehousing/distribution, clean industry and other types of development that optimize existing and planned facilities, services and transportation infrastructure. The General Plan facilitates the broadening of the City's tax base by actively facilitating revenue and employment generating development.

As discussed in Section III of this document, buildout of the proposed General Plan, annexation and SOI areas is expected to result in net positive economic impacts to the City. Given La Quinta's central location within the Coachella Valley, and the increased demand for construction workers and supplies, utilities, landscaping materials, and other goods and community services that would be associated with buildout, these positive economic effects are likely to extend beyond the City's boundaries. No significant adverse cumulative impacts associated with socio-economic resources are expected to result from adoption and implementation of the La Quinta General Plan, or with buildout of annexation No. 12 and the sphere of influence amendment.

CITY OF LA QUINTA

DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE COMPREHENSIVE GENERAL PLAN, ANNEXATION NO. 12 AND SPHERE OF INFLUENCE AMENDMENT

IX. ORGANIZATIONS, PERSONS AND DOCUMENTS CONSULTED

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Christine DiIorio, Planning Manager
Fred Baker, Principal Planner
Steve Spear, City Engineer
Britt Wilson, Assistant to the City Manager

J. Coachella Valley Water District

Thomas Levy, General Manager
Bruce Clark, Principal Sanitation Engineer
Todd Jorgenson

K. Myoma Dunes Mutual Water Company

Warren Stallard, General Manager

L. Utilities

Coachella Valley Water District
Myoma Dunes Mutual Water Company
Imperial Irrigation District
GTE California
The Gas Company
Time Warner
Waste Management of the Desert

M. Public Agencies

Riverside County Planning Department
City of Palm Desert Planning Department
City of Indian Wells Planning Department
City of Coachella Planning Department
City of Indio Planning Department
Riverside County Fire Department
Riverside County Sheriff's Department
Riverside County Waste Management Department
Riverside County Library System
City of La Quinta Public Library
Coachella Valley Unified School District
Desert Sands Unified School District
South Coast Air Quality Management District
Coachella Valley Association of Governments
Southern California Association of Governments
California Department of Transportation
California Office of Planning and Research
California Department of Finance
California Department of Fish and Game
California Integrated Waste Management Board
U.S Bureau of Land Management
U.S. Fish and Wildlife Service

N. Quasi-Public and Other Agencies

Coachella Valley Mountains Conservancy
Sunline Transit Agency

O. Medical Facilities

John F. Kennedy Memorial Hospital
Eisenhower Medical Center
Desert Hospital

P. Documents

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APPENDIX A

**Initial Study, Notice of Preparation (NOP)
and Responses to NOP**

September 6, 2001

and

**Initial Study, Amended Notice of Preparation (NOP),
Correction to Amended NOP,
and Responses to Amended NOP**

April 17 & 20, 2001

Prepared by

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NOTICE OF PREPARATION

OF AN

ENVIRONMENTAL IMPACT REPORT

FOR THE

CITY OF LA QUINTA GENERAL PLAN UPDATE

IN THE

COUNTY OF RIVERSIDE, CALIFORNIA

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NOTICE OF PREPARATION

OF AN

ENVIRONMENTAL IMPACT REPORT

FOR THE

CITY OF LA QUINTA
COMPREHENSIVE GENERAL PLAN

Introduction

The City of La Quinta, located in Riverside County, California is in the process of drafting an update to its Comprehensive General Plan. The City and its consultant have been collecting a broad range of data and information pertaining to the existing physical and environmental conditions within the City and the Coachella Valley region. To further assess the characteristics of the General Plan study area, a series of special studies have been prepared, including those which address traffic and circulation, geotechnical conditions, noise, and biological and cultural resources.

Given the broad scope of the General Plan project and the need for subsequent environmental analysis for specific projects within the community, a Program EIR is currently envisioned. Descriptions of the planning area and particular areas of environmental concern which will be addressed in the EIR are provided below.

Project Description

The General Plan planning area includes a total of approximately 53,497.7 acres, including 20,253.5 acres of incorporated City lands, and 30,168.1 acres of sphere-of-influence and other adjacent lands outside the sphere-of-influence. Over the past year, City staff, the Planning Commission and City Council have held numerous meetings to discuss overall and specific goals for the community, as well as specific policies for inclusion in the General Plan policy document. A detailed assessment of existing land use designations was conducted, and a new set of land use designations has been considered in various portions of the City. A description of the proposed land use designations is provided in Table 1. Modifications to the circulation system have also been considered to address current and projected traffic volumes on major roadways.

In addition to the Program EIR, the General Plan update will consist of two separate documents: 1) the Master Environmental Assessment, which addresses existing conditions and the level of services currently provided in the planning area, and 2) the General Plan policy document, which includes a series of elements.

According to California Government Code Section 65302, a General Plan is required to include the following seven elements: Land Use, Circulation, Housing, Conservation, Open Space, Noise and Safety. The Draft La Quinta General Plan will address each of these statutory elements, although interrelated elements may be consolidated. Additional elements to be addressed include Parks and Recreation, and Infrastructure and Public Services. Each element will include a purpose statement, a

brief description of the regulatory environment and the element's relationship to other General Plan elements, and goals, policies and programs. The Housing Element will be prepared independently of the other General Plan Elements.

Table 1
City of La Quinta Draft General Plan
Proposed Land Use Designations

Land Use Designation (Density)	Purpose of Land Use
Residential Land Uses	
Very Low Density Residential, VLDR (Up to 2 dwelling units per acre)	This designation provides for large lot single family residential development at the southeastern boundary of the City, and in the southeastern-most portions of the planning area. The designation provides a transition between agricultural lands and more intense residential uses. It encourages large lot subdivisions, and promotes the progression of land uses.
Low Density Residential, LDR (Up to 4 dwelling units per acre)	This land use designation is the most prevalent in the City and the planning area. It supports the development of single family attached and detached development, both in a country club setting and in standard subdivisions. The clustering of smaller housing units, including condominiums and townhomes, may be appropriate in this designation, with the provision of common area amenities and open space, when governed by a Specific Plan.
Medium Density Residential, MDR (Up to 8 dwelling units per acre)	This designation allows the development of single family attached and detached units on smaller lots. The Cove area of the City falls under this designation. The clustering of smaller housing units, including condominiums and townhomes, may be appropriate in this designation, with the provision of common area amenities and open space, when governed by a Specific Plan.
Medium-High Density Residential, MHDR (Up to 12 dwelling units per acre)	This designation is appropriate for both single and multiple family dwelling units, including attached and detached units on small lots, condominiums and townhomes, and apartments. The clustering of smaller housing units, including condominiums, townhomes and apartments, is appropriate in this designation, with the provision of common area amenities and open space. Mobile home parks or subdivisions with common area amenities and open space may also allowed with the approval of a Conditional Use Permit under this designation.

Table 1
City of La Quinta Draft General Plan
Proposed Land Use Designations

High Density Residential, HDR (Up to 16 dwelling units per acre)	This designation allows for attached single and multi-family dwellings. This designation is also most suitable for planned communities and affordable and senior housing where smaller units and higher densities may be appropriate. Duplex and multiplex development is the most common. Mobile home parks or subdivisions with common area amenities and open space may also allowed with the approval of a Conditional Use Permit under this designation.
Agricultural Overlay	This overlay has been applied to underlying residential designations in the southern planning area. It recognizes the importance of the agricultural community in this part of the Coachella Valley, and demonstrates the City's commitment to maintaining existing agricultural land uses. Any agricultural land use within this overlay area shall be allowed to continue until such time as the land owner chooses to develop. Agricultural land uses within this overlay area can continue as they occur at the time this General Plan is adopted.
Commercial Land Uses	
Mixed Regional Commercial (M/RC)	This land use designation supports major commercial land uses along the Highway 111 corridor, on parcels of 20 acres or more. These land uses serve not only the City, but neighboring jurisdictions as well. Land uses typical of this designation include corporate offices, non-laboratory research and development facilities, major department and specialty stores, supermarkets and drug stores, medical offices, hospitals and clinics, hotels and motels, automobile sales and commercial recreational and entertainment facilities. Smaller commercial retail facilities which support and are complementary to the primary land uses in this category are also permitted. These would include but not be limited to restaurants, services and some automobile service related land uses. High density residential land uses are permitted only if they are more than 600 feet south of Highway 111. A Specific Plan is required for all lands under this designation.

Table 1
City of La Quinta Draft General Plan
Proposed Land Use Designations

Community Commercial, CC	This designation provides for larger, community-scale shopping centers, on parcels ranging from 20 to 30 acres in size, along major arterial roadways. These centers include large scale anchors as well as a variety of retail outlets and restaurant and entertainment uses to meet the needs of multiple neighborhoods. Other typical land uses include general merchandise, hardware, food and drug stores, offices and personal services. Hotels and motels may also be appropriate within this designation.
Neighborhood Commercial, NC	This designation supports the development of commercial land uses which serve the daily needs of the adjacent neighborhood on parcels of 10 to 20 acres. Typical land uses include food and drug stores, personal services, small restaurants, and financial institutions. This designation generally occurs at arterial and major arterial intersections.
Commercial Park, CP	The typical land uses under this designation are office and light industrial: warehousing and storage, office/ warehouse combined uses, high technology light manufacturing and automobile repair.
Office, O	This designation allows for the development of professional and general offices, including financial, medical and legal offices. Retail commercial uses which support these offices may also be appropriate under this designation, but shall not be the principal use.
Resort Mixed Use, RMU	This land use designation is intended for projects which propose a wide range of potential land uses. A minimum of 80 acres is required for any project in this land use designation. Single and multi-family residential units, and condominium development are permitted in this designation, as are golf courses, and land uses permitted in the Tourist Commercial designation. Timeshares, recreational vehicle parks and resorts and mobile home parks and subdivisions may be permitted with a Specific Plan.

Table 1
City of La Quinta Draft General Plan
Proposed Land Use Designations

Tourist Commercial, TC	Uses allowed under this designation are limited to resort hotels, tourist commercial and recreational land uses, such as destination hotels, conference centers and hotels, restaurants and ancillary retail land uses. Time share projects may also be appropriate under this designation with the approval of a Conditional Use Permit, A Specific Plan is required in the Tourist Commercial designation.
Village Commercial, VC	The intent of this designation is to provide for small scale, pedestrian oriented specialty retail stores, which help create a village atmosphere. Typical land uses include art galleries, restaurants and cafes, apparel and jewelry stores and services. Medium High Density and High Density residential land uses may also be appropriate under this designation.
Other Land Uses	
Industrial, I	This land use designation is applied to lands in the planning area. It provides for business parks and the development non-polluting industrial uses operating entirely in enclosed buildings, and those requiring limited and screened outdoor storage. Examples include clean manufacturing operations, aircraft or airport related uses, warehousing and distribution facilities, mini-warehouse storage, and a variety of light manufacturing businesses. Siting industrial lands in close proximity to major regional highway and railroad facilities is also desirable. Preferred development includes master planned business and industrial parks with integrated access and internal circulation. With the approval of a Conditional Use Permit, more intense industrial uses with the potential to generate substantial levels of noise smoke, dust, glare, traffic vibration or other nuisance may also be allowed. These uses would include the manufacturing of durable goods such as appliances, furniture, fabricated metal products, and transportation equipment.

Table 1
City of La Quinta Draft General Plan
Proposed Land Use Designations

Major Community Facilities, MC	All projects proposed within this designation will mitigate any adverse environmental impacts to acceptable or insignificant levels and be compatible with existing and planned land uses. A Specific Plan is required under this designation. This designation is applied to existing or planned municipal, educational or public service facilities. Typical land uses within this designation include civic centers and other governmental offices, fire stations, schools and substations.
Park, P	This designation is applied to existing municipal and regional park facilities.
Floating Park Designation, P	In the southern planning area, this floating designation is not assigned to a specific parcel, but indicates that a park or parks will be located in the general area in the future.
Open Space, OS	This designation applies to lands in public or quasi-public ownership in the hillsides of the City and planning area. The designation allows the discretionary approval of trails, trailheads, and similar facilities.
Hillside Overlay	This overlay is applied to lands above the toe of slope. The provisions of the Hillside Preservation Ordinance shall apply.
Golf Course, G	Public and private golf courses, and associated ancillary facilities.
Watercourse/Flood Control, W	Floodways and drainage channels.
Airport, AP	Designates the Bermuda Dunes and Thermal airport areas.

Table 2
Statistical Summary of Land Uses
Current Comprehensive General Plans (City and County)

	City of La Quinta			Sphere & Planning Area			
Land Use Designation	Developed Acres	Vacant Acres	Total Acres	Developed Acres	Vacant Acres	Total Acres	Total Acres City & Planning Area
Residential Land Uses							
AG 1 du/10 ac.				16,152.1	3,786.3	19,938.4	19,938.4
4 0-.2 du/ac.				124.3	270.4	394.7	394.7
VLDR 0-2 du/ac.	571.5	320.1	891.6				891.6
3B 0.2-0.4 du/ac				234.0	41.1	275.1	275.1
3A 0.4-2.0 du/ac.				459.2	259.8	719.0	719.0
LDR 2-4 du/ac.	3,749.4	3,720.9	7,470.3	10.9		10.9	7,481.2
2B 2-5 du/ac.				1,153.1	1,365.1	2,518.2	2,518.2
RL 4 du/ac.				207.8	211.0	418.8	418.8
MDR 4-8 du/ac.	1,040.9	262.0	1,302.9	194.2	129.3	323.5	1,626.4
2A 5-8 du/ac.				44.4	10.4	54.8	54.8
2A MF 5-8 du/ac.				158.4	51.0	209.4	209.4
MHDR 8-12 du/ac.		14.6	14.6	336.3	128.5	464.8	479.4
RM 8 du/ac.				358.8	100.7	459.5	459.5
HDR 12-16 du/ac.	1.3	99.6	100.9				100.9
RH 15 du/ac.				102.8	85.2	188.0	188.0
Total Residential	5,363.1	4,417.2	9,780.3	19,536.3	6,438.8	25,787.1	45,635.7
Commercial Land Uses							
Land Use Designation	Developed Acres	Vacant Acres	Total Acres	Developed Acres	Vacant Acres	Total Acres	Total Acres City & Planning Area
M/RC Mixed Comm.	115.7	432.3	548.0	39.9		39.9	587.9
AP/MU Air Park/Mixed Use				69.3	14.3	83.6	83.6
CC Community Comm.	19.6	91.0	110.6				110.6
C Commercial				135.7	81.3	217.0	217.0
NC Neighborhood Comm.	54.0	20.7	74.7				74.7
CP Commercial Park	0.0	64.0	64.0				64.0
O Office	4.7	39.9	44.6	43.7		43.7	88.3
TC Tourist Commercial	166.3	106.1	272.4				272.4
VC Village Commercial	71.5	53.4	124.9				124.9
Total Commercial	431.8	807.4	1,239.2	288.6	95.6	384.2	1,623.4

	City of La Quinta			Sphere & Planning Area			
Land Use Designation	Developed Acres	Vacant Acres	Total Acres	Developed Acres	Vacant Acres	Total Acres	Total Acres City & Planning Area
Industrial Land Uses							
HI Heavy Industrial				132.0		132.0	132.0
LI Light Industrial				121.2		121.2	121.2
M Manufacturing				458.3	582.5	1,040.8	1,040.8
W/D Warehousing				47.8	17.8	65.6	65.6
Total Industrial				759.3	600.3	1,359.6	1,359.6
Other Land Uses							
MC Major Community Facilities	100.4	11.5	111.9	2.7		2.7	114.6
PF Public Facilities					36.7	36.7	36.7
School				56.6	11.3	67.9	67.9
P Park	598.0	106.3	704.3	196.7	7.8	204.5	908.8
OS Open Space	1,392.4	4,184.6	5,577.0	497.8	1,780.3	2,278.1	7,855.1
G Golf Course	2,021.0	219.0	2,240.0	625.1	126.5	751.6	2,991.6
W Watercourse	467.8	132.8	600.6				600.6
AP Airport				559.8	1,624.0	2,183.8	2,183.8
Total Other Use	4,579.6	4,654.2	9,233.8	1,938.7	3,586.6	5,525.3	14,759.1
Total Acreage	10,374.5	9,878.8	20,253.3	22,522.9	10,721.3	33,244.2	53,497.5

Table 3
Statistical Summary of Land Uses
Preferred Alternative

	City of La Quinta			Sphere & Planning Area			
Land Use Designation	Developed Acres	Vacant Acres	Total Acres	Developed Acres	Vacant Acres	Total Acres	Total Ac. City & Plan. Area
Residential Land Uses							
VLDR 0-2 du/ac.	294.3	200.8	495.1	5,231.8	1,362.2	6,594.0	7,089.1
LDR 2-4 du/ac.	3,035.8	2,978.3	6,014.2	12,445.5	4,245.0	16,690.5	22,704.7
MDR 4-8 du/ac.	1,012.2	269.7	1,281.9	740.2	291.4	1,031.6	2,313.5
MHDR 8-12 du/ac.	14.4	83.6	98.0	336.3	128.5	464.8	562.8
HDR 12-16 du/ac.	1.9	92.1	94.0	102.8	85.2	188.0	282.0
Total Residential	4,358.6	3,624.5	7,983.2	18,856.6	6,112.3	24,968.9	32,952.1
Commercial Land Uses							
M/RC Mixed Commercial	87.9	309.0	396.9	109.2	14.3	123.5	520.4
CC Community Comm.	24.2	121.3	145.5	263.4	75.0	338.4	483.9
NC Neighborhood Comm.	56.6	55.3	111.9	80.8	11.3	92.1	204.0
CP Commercial Park	0.00	64.0	64.0	-	-	-	64.0
O Office	0.00	39.9	39.9	43.7	-	43.7	83.6
TC Tourist Commercial	328.3	178.7	507.0	-	-	-	507.0
VC Village Commercial	58.2	43.9	102.1	31.4	-	31.4	133.5
Total Commercial	555.2	812.1	1,367.3	528.5	100.6	619.2	1,996.4
Other Land Uses							
I Industrial	-	-	-	1,199.0	748.0	1,947.0	1,947.0
MC Major Community Facilities	179.4	12.1	191.5	59.4	48.0	107.4	298.9
P Park Facilities	598.0	118.9	716.9	196.7	7.8	204.5	921.4
OS Open Space	1,215.2	4,234.7	5,450.0	497.8	1,954.1	2,451.9	7,901.9
G Golf Course	2,999.2	943.7	3,942.9	625.1	126.5	751.6	4,694.5
W Watercourse	468.9	132.8	601.7	-	-	-	601.7
AP Airport	-	-	-	559.8	1,624.0	2,183.8	2,183.8
Total Other Use	5,460.7	5,442.2	10,903.0	3,137.8	4,508.4	7,646.2	18,549.2
Total Acreage	10,374.5	9,878.8	20,253.5	22,522.9	10,721.3	33,244.2	53,497.5

Current Land Use

The General Plan planning area includes lands within the incorporated limits of the City of La Quinta, lands within its sphere-of-influence, and unincorporated lands outside the sphere-of-influence, which are collectively referred to as the "planning area." The current land use pattern in the City of La Quinta is representative of the low density, resort residential communities found in the Coachella Valley. The City is generally bounded on the west by Washington Street and the slopes of the Santa Rosa Mountains; on the north by Fred Waring Drive; on the east by Jefferson Street and Monroe; and on the south by the Santa Rosa Mountains. The remainder of the planning area generally consists of two regions: the Bermuda Dunes area, located between Washington and Jefferson Streets to the west and east, respectively, and Fred Waring Drive and Interstate 10 to the south and north, respectively; and the Thermal area, which abuts the southeastern portion of the City, and extends to Highway 86 on the east, between Airport Boulevard and Avenue 66 on the north and south, respectively. The boundaries of the planning area are illustrated in Exhibits ? and ?.

Residential development in the City consists primarily of low density detached and attached single family dwellings in standard subdivisions, gated communities and country club developments. The Cove area of the City represents the oldest residential development, and occurs on smaller lots in a standard street grid. Some multi-family development has occurred in the City, but does not represent a significant percentage of the residential development in the community. Residential land uses represent 48% of all land uses in the City, and 64% of land uses in the City, its sphere of influence, and its planning area. Further analysis shows that 90% of the residential lands within the planning area are at densities of 4 units to the acre or less. In the planning area, 53% of the residential lands are in agriculture. All of the agriculturally designated lands are in the Thermal planning area. Medium and high density land use designations total 3,118.4 acres in the entire planning area, which represents 10% of all residential lands, and 6% of all land uses.

There are currently 1,239± acres of commercially designated lands within the City limits, and 1,613± in the entire planning area. This represents 6% of lands within the City, and 3% of lands within the entire planning area. The land uses permitted in the commercial designations provide for a broad range of development ranging from office to regional commercial.

There are no industrially designated lands within the City limits currently. In the planning area, 1,359.7 acres are currently designated, primarily adjacent to the Bermuda Dunes and Thermal airports. Industrial designations represent 3% of all lands in the planning area. The industrial land uses range from warehousing to heavy industrial in nature.

The balance of land uses in the City, its sphere and its planning area include public and quasi-public development, representing 199 acres or 0.4% of all lands; parks, with 909 acres or 2% of all lands; open space, with 7,855 acres or 15% of all lands; golf courses, totalling 2,992 acres or 6% of all lands; watercourse, with 601 acres or 1% of all lands; and airports, with 2,184 acres or 4% of all lands.

Recommended Alternative Land Use Plan

The fundamental character of the City will not be altered by the changes in the land use designations and acreages proposed by the Recommended Alternative. Land use designations in the planning area have been incorporated into existing City land use designations. In the planning area, the most significant change is represented in the agricultural land use designation, which has been eliminated. Lands currently in the agricultural designation have been assigned a low density residential land use designation, with an agricultural overlay. The City's use element policies and

land use map provide for the protection of agriculturally designated lands, until such time as the land owner wishes to develop a more intense land use.

Commercial land use designations are also not proposed to change significantly under the recommended alternative. All land use assignments are depicted in Table 7, above. A single land use designation has been added -- Resort Mixed Use -- which has not been assigned to specific parcels. The land use designation was created to allow for mixed use projects which combine golf, hotel, time share and residential land uses on large parcels. Its assignment will be requested by land owners who wish to apply its standards to their properties in the future.

All the industrial land use designations have been combined into one Industrial designation, which shall allow a wide range of such land uses. The requirement for a Specific Plan of Land Use would be required for Industrially designated lands. Other land uses remain essentially as they currently occur.

Several planned golf courses, which had previously not been shown on the land use map, have been included in the recommended alternative.

Surrounding Land Uses

A number of jurisdictions surround the City, including the cities of Palm Desert and Indian Wells to the west, the County of Riverside on the north, east and south, and the cities of Indio and Coachella on the east. Lands to the west are generally designated for residential and commercial land uses, as are lands to the north of the City. Lands in Indio to the east are primarily commercial, while lands in Coachella are residential and commercial in nature. Lands under Riverside County's jurisdiction outside the planning area (discussed above under Current Land Use) are primarily agricultural and open space in nature.

As a rule, lands to the west and north of the City, its sphere and its planning area are more urban, while lands to the east and south are more rural. This pattern can be expected to continue for the short to mid term. The Riverside County General Plan is currently being revised, and new land use designations may vary from those currently assigned to planning area and surrounding lands.

The City is generally bounded on the south and west by the steep slopes and foothills of the Santa Rosa Mountains, which form the southern boundary of the larger Coachella Valley. The Coral Reef Mountains extend north from the Santa Rosas into the central portion of the City and physically constrain development in this area. Much of the land within the Santa Rosa Mountains is publicly owned, and is preserved as open space and targeted for conservation.

Project Location

The boundaries of the General Plan planning area can generally be described as follows: bounded on the north by Interstate-10, on the south by Avenue 66, and on the west and southwest by the Santa Rosa Mountains. The southern portion of the planning area is bounded on the east by State Highway 111, while the northern portion is generally bounded on the east by Monroe Street. The boundaries of the planning area are illustrated in Exhibits 7 and 8, below.

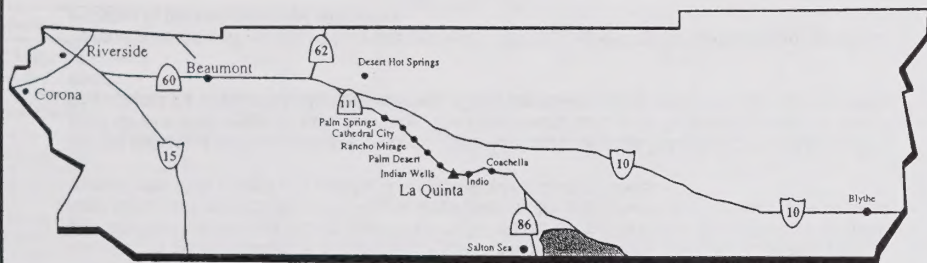
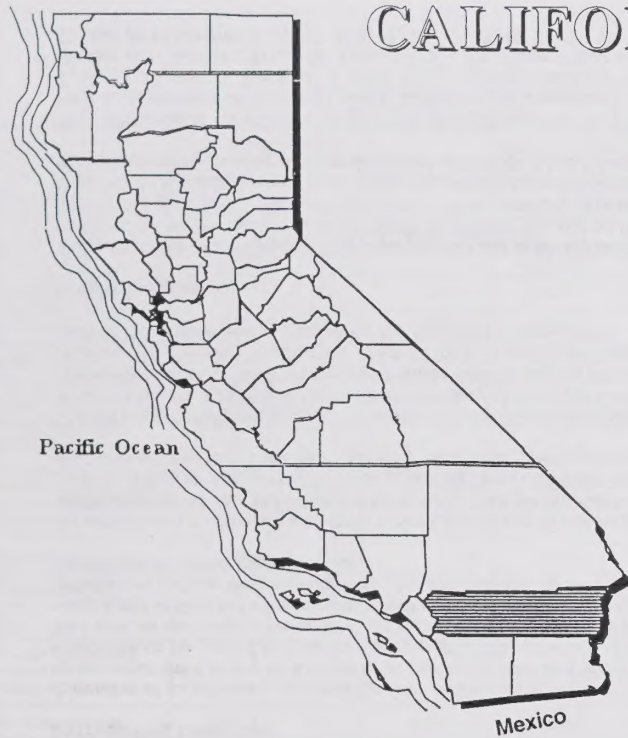
The incorporated City limits of the City of La Quinta can be more specifically described as including: portions of Section 25 and all of Section 36, Township 5 South, Range 6 East; Sections 1, 12, 13, 24, and 25, Township 6 South, Range 6 East; portions of Sections 18, 19, 20, 28, 29, and 30, and all of Sections 31 and 32, Township 5 South, Range 7 East; portions of Sections 10, 22, and 28, and all of Sections 4, 5, 6, 7, 8, 9, 15, 16, 17, 18, 19, 20, 21, 29, 30 and 33, Township 6 South,

Range 7 East; Sections 4 and 5, Township 7 South, Range 7 East of the San Bernardino Baseline and Meridian.

Sphere-of-influence lands include the following: portions of Section 18, Township 5 South, Range 7 East; and portions of Sections 10, 22, 27 and 28, Township 6 South, Range 7 East of the San Bernardino Baseline and Meridian.

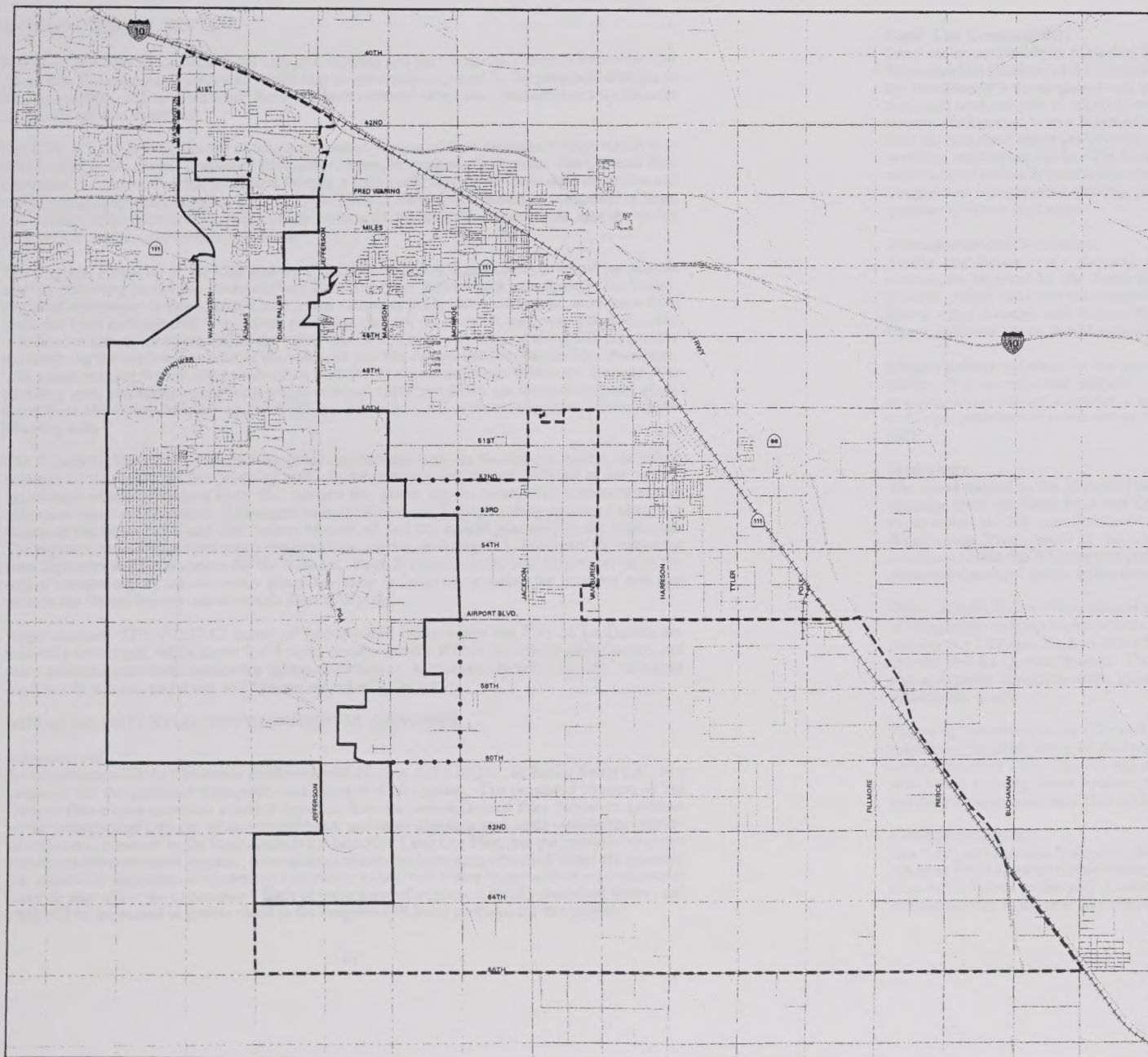
Other planning area lands include: portions of Sections 6, 7, 8, 16, 17, 18, Township 5 South, Range 7 East; Sections 23, 24, 25, 26, 33, 34, 35, 36, Township 6 South, Range 7 East; portions of Sections 22, 23, 26, 35, 36, and all of Sections 19, 20, 21, 27, 28, 29, 30, 31, 32, 33, 34, Township 6 South, Range 8 East; Sections 1, 2, 3, 8, 9, 10, 11, 12, Township 7 South, Range 7 East; portions of Sections 1, 6, 7, and all of Sections 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, Township 7 South, Range 8 East of the San Bernardino Baseline and Meridian.

CALIFORNIA



RIVERSIDE COUNTY





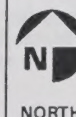
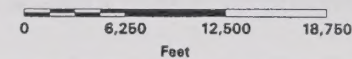
City of La Quinta General Plan

Exhibit II

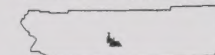
LEGEND

-  **Roads**
-  **Township/Range Sections**
-  **Railroads**
-  **City Limits**
-  **General Plan Planning Area**
-  **City Sphere of Influence**

Scale
1:90,000



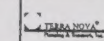
Riverside County Vicinity Map



Map Prepared on: July 10, 2000

Map Prepared by: Aerial Information Systems

Map Version No.: 5





ALPHABETICALLY
GENERAL INDEX
CITY OF LOS ANGELES

INDEX

- Water
- Land
- Roads
- Railroads
- Canals
- Ditches
- Wells
- Buildings
- Other

ENVIRONMENTAL SETTING

Following is a brief description of the City of La Quinta and the Coachella Valley in which the City is located. Environmental resources which may be adversely impacted by the proposed changes to the General Plan, and environmental hazards which currently affect the community of may do so in the future, are also described.

The City of La Quinta is located in the south central portion of the Coachella Valley, which is in turn located in the central portion of Riverside County, in southern California. The General Plan study area is contained within the Salton Trough, a fault-controlled valley basin with expansive and varying geography and biological habitats. This Sonoran Desert environment is comprised of large and smaller scale alluvial fans, rocky/sandy washes which drain local mountains, and the valley floor which contains sand dunes and fields.

The physical character of the City and the Coachella Valley is significantly affected by seismic activity occurring on the San Andreas Fault Zone and other faults which pass through the Valley. Regional topography is characterized by extreme variations in elevation and terrain, and ranges from a sub-sea level geologic sink to mountain peaks that rise two miles above sea level. The Salton Sea is located at the southeastern end of the valley and occurs at an elevation of about 288 feet below sea level. At the northwestern end of the valley are the San Jacinto and San Bernardino Mountains, with peaks ranging from 9,600 to more than 11,500 feet above sea level. Within the General Plan planning area, elevations range from a high of about 1600 feet above sea level at the peak of the Coral Reef Mountains, to a low of about 190 feet below sea level in the southeastern portion of the planning area.

The Coachella Valley is known for its prime agricultural lands in the eastern valley, including portions of the General Plan planning area. In the western and central portions of the valley, agriculture which developed early this century has given way to residential, commercial and exclusive resort development. Urbanization in the Coachella Valley initially occurred along the slopes of the Santa Rosa and San Jacinto Mountains, but has spread primarily to the southeast. The region is served by several major transportation arteries, including U.S. Interstate-10, numerous state highways and the Southern Pacific Railroad. Palm Springs International Airport serves as the region's major airport, but secondary general aviation facilities occur within the planning area and include the Desert Resorts and Bermuda Dunes Airports.

Approximately 51% (10,374.5 acres) of incorporated lands within the City of La Quinta are currently developed, while about 9,879 acres remain vacant. Within the sphere-of-influence and other planning area lands outside the sphere-of-influence, approximately 66% (19,989.1 acres) of lands are developed, and about 10,179 acres are currently vacant.

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

Introduction

In accordance with the California Environmental Quality Act (CEQA), an Initial Study has been prepared for the proposed Comprehensive General Plan Update. The proposed changes to the General Plan do not constitute a radical departure from the current General Plan. However, buildout of the incorporated City, its sphere-of-influence, and other planning area lands outside the sphere-of-influence, pursuant to the Recommended Alternative Land Use Plan, has the potential to cause significant environmental impacts. Several areas of concern have been identified where the potential for impacts to important environmental resources exists, and where impacts from environmental hazards may affect the community. Each of these areas of concern is briefly described below, and each will be addressed in greater detail in the Program EIR being prepared for this project.

Land Use Compatibility

Land use compatibility is critical to developing an effective and responsive General Plan update. The Land Use Element of the General Plan clarifies and addresses most of the concerns regarding the community's development and plays an essential role in synthesizing land use issues. The proposed land use plan is meant to establish basic goals and policies relevant to a low to medium density community, with a balanced mix of locally and regionally serving land uses. Patterns of land use and open space preservation have been assigned to preserve existing neighborhoods and sensitive open space lands. The Land Use Element continues to support the logical and staged expansion of public infrastructure and the land uses they serve. The proposed land use pattern is designed to complement existing patterns, while also enhancing the functional and aesthetic qualities of future land uses.

Transportation/Circulation

Traffic circulation in the planning area is governed to a significant extent by the geographic constraints imposed by the Santa Rosa and Coral Reef Mountains and existing development patterns. Major east-west conveyance is achieved primarily along State Highway 111, Fred Waring Drive, 42nd Avenue, and Airport Boulevard. Major north-south arterials include Washington Street, Jefferson Street, and Monroe Street.

Major roadway segments in the planning area are likely to be substantially impacted by future traffic. It is essential that impacts to the roadway system be thoroughly analyzed to assure that roadways can continue to operate at acceptable levels as the planning area builds out. The need for and appropriateness of future design modifications and mitigation measures will be assessed in the EIR.

Hydrology

The flood hazard in the General Plan planning area is related primarily to storm flooding and drainage from the Santa Rosa and Coral Reef Mountains. Limited portions of the planning area occur within the 100-year flood zone. These include lands in the vicinity of Eisenhower Drive and Washington Street, south of the La Quinta Evacuation Channel. The 100-year flood is also contained within the Whitewater River, the La Quinta Evacuation Channel, and a series of channels, dikes and detention basins which surround the Cove neighborhood.

The Coachella Valley Water District and the City of La Quinta have participated in the construction of stormwater drainage improvements in the study area, some of which include the Coachella Valley Stormwater Channel, the La Quinta Evacuation Channel, the Upper Bear Creek drainage system, and the East La Quinta Channel. The City also maintains storm drains in the Cove neighborhood, and anticipates installing curbs, gutters and possibly storm drains in the Downtown Village area within a few years.

Future development in the City and planning area may contribute to an incremental increase in runoff and flooding potential, and may be subject to storm hazards as well as seismically induced inundation from Lake Cahuilla and above-ground storage tanks. The General Plan Program EIR will assess existing flood hazards, the implications of continued urbanization, and anticipated flooding hazards associated with buildout of the General Plan.

Geology/Seismicity

The City and Coachella Valley are affected by the active geologic conditions associated with the San Andreas Fault Zone and other nearby faults. Major earthquakes have occurred in and around the Coachella Valley in the past decade, and the region is considered a prime candidate for major seismic activity in the next 20 to 30 years.

Although no active or potentially active faults are known to occur within the planning area, the San Andreas, San Jacinto, and Elsinore Fault Zones are located in the project vicinity and are capable of impacting development within the planning area. Issues associated with these geotechnical conditions include ground rupture, strong ground shaking, liquefaction, subsidence and slope instability. In particular, potential instability of the rocky hillsides of the Santa Rosa and Coral Reef Mountains, and liquefaction in the eastern portion of the planning area pose a potential threat to development in the planning area. The northern portion of the planning area is subject to strong, sustained winds and is susceptible to the effects of wind erosion and blowsand. Lands disturbed by agriculture, grading and flooding may also be adversely impacted by significant erosive forces. These and associated issues will be addressed in detail in the EIR.

Air Quality

Compared to other communities in southern California, the City of La Quinta has generally good air quality. However, in the past few decades, a noticeable deterioration in air quality has occurred due to increased development, population growth, traffic, construction activity and various other site disturbances.

The City of La Quinta and the Coachella Valley are located within the Salton Sea Air Basin (SSAB). The South Coast Air Quality Management District (SCAQMD) is responsible for establishing air quality management criteria and management policies for the SSAB and neighboring air basins. The SCAQMD also routinely monitors daily pollutant levels and meteorological factors throughout the District. Local monitoring is conducted in Indio and at the Palm Springs International Airport.

Of all air pollutants, ozone and PM₁₀ (suspended particulate matter) are the most prevalent in the Coachella Valley. The Valley is currently classified as a "severe-17" non-attainment area for ozone under the federal Clean Air Act. Although these pollutants are produced from various sources within the Coachella Valley, the most evident degradation of air quality from ozone may be attributed to sources outside the area, including the Los Angeles County and San Bernardino/Riverside air basins. The region is also classified as a "serious" non-attainment area for PM₁₀ by the U.S. EPA. However, recent monitoring data indicate that PM₁₀ emissions in the region have been reduced considerably, and the Coachella Valley may soon be eligible for reconsideration by the EPA as having attained the federal PM₁₀ standard.

Buildout associated with implementation of the General Plan may result in occasional and temporary exceedances of both state and federal standards for various air pollutants. These issues will be more fully assessed in the Program EIR.

Water Resources

Domestic water resources for the City of La Quinta and unincorporated lands southeast of the City limits are provided by the Coachella Valley Water District (CVWD). The Myoma Dunes Mutual Water Company provides domestic water to the Bermuda Dunes area in the northernmost portion of the planning area. Both water purveyors utilize wells to extract groundwater from the Whitewater River Subbasin. The Whitewater River Subbasin is recharged both naturally, through percolation of rainfall and mountain runoff, and artificially through the importation of Colorado River water transported via the Colorado River Aqueduct. The subbasin is extensive, but has been in an overdraft condition for several years. While the annual overdraft ($\pm 0.24\%$) is rather limited, continued growth in the City and other parts of the subbasin service area will have a cumulative effect on the long-term viability of this water source. The Program EIR will quantify General Plan buildout demand for these resources and provide mitigation measures designed to address projected impacts.

Biological Resources

The City of La Quinta and the Coachella Valley are located within one of the most biologically unique and diverse regions in the country. The Valley supports a wide variety of common and sensitive plants and animals that are well adapted to the desert floor, alluvial fan and rocky hillside environments that comprise the region. Common species which are known to occur in these habitats include the desert iguana, Golden eagle, coyote, black-tailed jackrabbit, Prairie falcons and several species of bats. The study area also supports a number of sensitive species, which are listed by state and/or federal governments as endangered, threatened, or species of concern. Sensitive animal species occurring in the region include the Coachella Valley fringe-toed lizard, desert tortoise, LeConte's thrasher, endangered Peninsular bighorn sheep and Crissal thrasher. Sensitive plant species include the California ditaxis, Coachella Valley milk-vetch, flat-seeded spurge, and glandular ditaxis.

One of the most unique biological species in the region is the Coachella Valley fringe-toed lizard (CVFTL), which is dependent upon the natural blowsand processes of the Coachella Valley. The CVFTL was listed as a federally threatened and state endangered species in 1980. The Coachella Valley Fringe-toed Lizard Habitat Conservation Plan was developed in 1985 as a cooperative federal and local program of conservation for the species. Portions of the General Plan planning area lie within the boundaries of occupiable CVFTL habitat, and development within these areas is subject to the provisions of the CVFTL Habitat Conservation Plan.

The City of La Quinta and other communities in the Coachella Valley are currently participating in the preparation of the Coachella Valley Multi-Species Habitat Conservation Plan (MSHCP). This Plan is designed to conserve adequate, unfragmented habitat for a wide range of plan communities and special-status animal species. Once adopted, the Plan will standardize mitigation and compensation measures for species of concern on a regional basis, and may limit the need for project-by-project biological review. The Program EIR will evaluate potential impacts of General Plan buildout on biological species occurring in the planning area.

Noise

The predominant noise source in the planning area is vehicular traffic. In general, the existing noise environment in the City is relatively quiet, with significant noise associated with Interstate-10, State Highway 111, Washington Street and other major arterials. Other substantial noise generators include the Southern Pacific Railroad, construction vehicles and equipment, and mechanical equipment including fans and compressors. Occasionally intrusive noise levels are generated by small aircraft approaching or departing from the Thermal and Bermuda Dunes Airports. Noise levels generated by current traffic will be evaluated, and future traffic will be modeled to determine associated impacts and establish parameters for mitigation.

Cultural Resources

The most identifiable native culture to evolve in the Coachella Valley region is the Desert Cahuilla, whose territory extended from the Salton Sea (ancient Lake Cahuilla) to the San Geronio Pass. Most Cahuilla sites are associated with canyons, especially those associated with permanent or seasonal surface water, including site located along tectonic faults that interrupt the movement of ground water and direct it to the surface. Because of its unique geographical location straddling the ancient shoreline of Lake Cahuilla, the City of La Quinta is located within one of the most dense concentrations of archaeological sites in California. A substantial number of cultural sites developed by the Cahuilla have been identified and recorded in the planning area, including villages, trail and road segments, and several wells.

Historic resources are generally defined as those structures or features more than 45 years old that contain evidence of human activity. Nearly 120 important historic resources have been identified and recorded inside or in the immediate vicinity of the planning area, including historic buildings or building groups, a cemetery, and canal. The majority of these are of late 1930s and 1940s vintage, but the oldest feature dates back to 1876. The potential impacts of continued urbanization on archaeological and historic resources will be addressed in the Program EIR.

Scenic Resources

One of the Coachella Valley's most important assets is its exceptional mountain and open space views. The Valley is bordered on the north, west and south by the Little San Bernardino, San Bernardino, San Jacinto and Santa Rosa Mountains. The contrasting mountain scenery and vast expanses of desert on the valley floor contribute to the valley's scenic beauty and help define its character. Views of the San Jacinto and Santa Rosa Mountains, in particular, are highly valued, and continued development in the General Plan planning area could constitute a significant impact to these and other valuable scenic resources. The Program EIR will assess the potential for adverse impacts to these resources.

Socio-Economic Resources

Since 1990, the City of La Quinta has been the fastest growing city in the Coachella Valley, with population increases averaging about 10% per year. From 1990 to 1997, the number of households in the City increased by 61.7 percent.¹ The City's population was estimated at 21,763 permanent residents in 1999.² The average La Quinta resident is younger than the state average, with a median age of 32 years versus 36 years. The average City resident also enjoys a higher per capita income than the average County or State resident. In 1998, the per capita income was \$19,700 for the City of La Quinta, \$17,400 for Riverside County, and \$18,400 for the state of California.³ Household incomes are also relatively high, averaging about \$70,000, with an average household size of 2.82 persons.⁴

La Quinta is a relatively new market in the Coachella Valley, but one which has grown rapidly. Historically, the City has been identified with the La Quinta Hotel, and the PGA West and Rancho La Quinta golf communities, and these facilities continue to provide the city with national recognition as a resort-oriented community. Resort and commercial development generates the majority of the municipal revenues received by the City, in the form of transient occupancy and sales taxes. Combined, these revenues comprise approximately 66% of City revenues.⁵ La Quinta is also emerging as a sub-regional retailing center for the eastern central portion of the Valley and has attracted several large retailers, including Wal-Mart, Home Depot and Eagle Hardware.

¹ "La Quinta Market Analysis and Competitive Position Within the Coachella Valley," prepared by Sedway Group, January 25, 1999.

² California Department of Finance, January 1, 1999.

³ "1998-99 Economic Development Plan," prepared by Rosenow Spevacek Group, Inc., April 1998.

⁴ "La Quinta Market Analysis and Competitive Position Within the Coachella Valley," prepared by Sedway Group, January 25, 1999.

⁵ Ibid.

Most residential growth activity continues to be single family home development. Employment opportunities are generally service-oriented, and are centered around country clubs, construction, retail and landscape management industries. Major employers include the Westfield Shoppingtown Palm Desert, Coachella Valley Unified School District, Desert Sands Unified School District, County of Riverside, La Quinta Hotel and John F. Kennedy Hospital.

Public Services and Facilities

Fire protection services are provided to the City and the surrounding planning area by the Riverside County Fire Department through a contract with the Department of Forestry. The entire planning area is served by six fire stations with overlapping coverage areas. Four of these stations are located within the planning area, and two others are well situated to provide additional fire support and excellent response times to the community.

Police protection in the City is provided by the Riverside County Sheriff's Department, which operates out of a sheriff's station in Indio. Although police response times can vary depending upon the location of patrols and level of activity, current response times are within acceptable levels.

Public education is provided to the General Plan planning area by two school districts. The Desert Sands Unified School District (DSUSD) serves students living west of Jefferson Street and north of Avenue 48. Students living elsewhere in the planning area attend schools operated by the Coachella Valley Unified School District. The La Quinta Public Library, which is a branch of the Riverside County Library System, was recently expanded and includes approximately 28,000 volumes.

The City is fortunate to be located in close proximity to a number of regional recreational facilities, including Lake Cabuilla County Park and a system of public hiking and equestrian trails which are maintained by the Bureau of Land Management and traverse the Santa Rosa Mountains. In addition, the City owns, operates and maintains three neighborhood parks, one community park and one recreational senior center.

The Coachella Valley Water District (CVWD) is responsible for providing domestic water services to the majority of the planning area, including incorporated City lands and the Thermal area. However, only limited areas south of Avenue 58 are currently connected to the water delivery system. Domestic water is provided to the Bermuda Dunes community by the Myoma Dunes Mutual Water Company. Sewage collection and treatment services are provided by the CVWD, which operates two wastewater treatment plants serving the planning area. However, portions of the planning area, including much of Bermuda Dunes and lands south of Avenue 58, continue to rely on individual septic systems.

The City of La Quinta and Riverside County contract with Waste Management of the Desert for the collection and disposal of solid waste. The majority of solid waste collected in the planning area is disposed of at the Edom Hill Landfill in the Indio Hills. The projected closure date for the Edom Hill Landfill is year 2004. Solid waste from the Thermal community is transported to the Mecca Landfill, which is expected to close in year 2011. Given the impending closure of these landfills, the City and Waste Management of the Desert will need to evaluate and utilize alternative solid disposal sites in the near future.

Electrical service is provided to the planning area by the Imperial Irrigation District (IID), which operates six substations within or in the immediate vicinity of the planning area. Natural gas service is provided by The Gas Company through a series of pipelines of differing sizes and pressure capacities. Natural gas service is provided to the majority of the planning area, but is limited south of Airport Boulevard and in the La Quinta Cove. GTE California provides basic and state-of-the-

art telephone services to the planning area. Cable television services are provided by Time Warner through both overhead and underground lines. The impacts to these and other public and quasi-public services will be further evaluated in the project EIR.

Environmental Checklist Form

1. Project Title: La Quinta Comprehensive General Plan Update
2. Lead Agency Name and Address: City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253
3. Contact Person and Phone Number: Fred Baker
760-777-7125
4. Project Location: City of La Quinta, Riverside County, California
5. Project Sponsor's Name and Address: City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253
6. General Plan Designation: varies/all
7. Zoning: varies/all
8. Description of Project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)

New Comprehensive General Plan addressing ?? acres within the corporate limits, and ?? acres in the unincorporated planning area. Includes changes to land use designations, circulation system, and new goals, policies and programs for all General Plan Elements.
9. Surrounding Lane Uses and Setting: Briefly describe the project's surroundings.

Surrounding lands are under the jurisdiction of Riverside County, and the cities of Indio, Coachella, Indian Wells and Palm Desert. Surrounding lands are designated for a wide variety of permitted uses, some of which include residential, commercial, business park, agriculture and open space.
10. Other agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

Safety/Geotechnical Element to be reviewed by the California Division of Mines and Geology.

Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☒ Aesthetics	☐ Hazards and Hazardous Materials	☐ Public Services
☒ Agriculture Resources	☒ Hydrology and Water Quality	☐ Recreation
☒ Air Quality	☐ Land Use Planning	☒ Transportation/Traffic
☒ Biological Resources	☐ Mineral Resources	☐ Utilities and Service Systems
☐ Cultural Resources	☒ Noise	☒ Mandatory Findings
☐ Geology and Soils	☒ Population and Housing	

Determination

(To be completed by the Lead Agency.)

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared

☐

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the applicant. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☒

I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

☐

Signature N. S. Criste Date 9/1/00
Printed Name N. S. Criste For

Evaluation of Environmental Impacts:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the reference information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Potentially Significant Unless Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVIII, "Earlier Analysis," may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). Earlier analyses are discussed in Section XVIII at the end of the checklist.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) The analysis of each issue should identify:
 - a) the significance criteria or threshold used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance

Issues (and Supporting Information Sources):

Would the proposal result in potential impacts involving:

Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
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I. AESTHETICS. Would the project:

- a) Have a substantial adverse effect on a scenic vista? (Draft General Plan, Circulation Element)
- b) Damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (Draft General Plan, Circulation Element)
- c) Substantially degrade the existing visual character or quality of the site and its surroundings? (Draft General Plan, Circulation Element)
- d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (Draft General Plan, Env. Resources Element)

	X		
	X		
X			
X			

II. AGRICULTURAL RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model prepared by the California Dept. Of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

- a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to on-agr (Draft General Plan, Land Use Element)
- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? (Draft General Plan, Land Use Element)
- c) Involve other changes in the existing environment which, due to their location or nature, could individually or cumulatively result in loss of Farmland, to non-agricultural use? (Draft General Plan, Land Use Element)

X			
X			
	X		

III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

- a) Conflict with or obstruct implementation of the applicable Air Quality Attainment Plan or Congestion Management Plan? (Draft General Plan, Env. Resources Element)
- b) Violate any stationary source air quality standard or contribute to an existing or projected air quality violation? (Draft General Plan, Env. Resources Element)
- c) Result in a net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? (SCAQMD CEQA Handbook)
- d) Expose sensitive receptors to substantial pollutant concentrations? (Draft General Plan, Env. Resources Element)

	X		
	X		
X			
	X		

- e) Create objectionable odors affecting a substantial number of people? (Draft General Plan, Env. Resources Element)

		X	
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IV. BIOLOGICAL RESOURCES: Would the project:

- a) Have a substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (General Plan Draft MEA, Env. Resources)
- b) Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? (General Plan Draft MEA, Env. Resources)
- c) Adversely impact federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) Either individually or in combination with the known or probable impacts of other activities through direct removal, filling, hydrological interruption, or other means? (General Plan Draft MEA, Env. Resources)
- d) Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites? (General Plan Draft MEA, Env. Resources)
- e) Conflict with any local policies or ordinances protecting biological resources such as a tree preservation policy or ordinance? (General Plan Draft MEA, Env. Resources)
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan? (General Plan Draft MEA, Env. Resources)

X			
	X		
			X
X			
			X
		X	

V. CULTURAL RESOURCES: Would the project:

- a) Cause a substantial adverse change in the significance of a historical resource which is either listed or eligible for listing on the National Register of Historic Places, the California Register of Historic Resources, or a local register of historic resources? (General Plan Draft MEA, Env. Resources)
- b) Cause a substantial adverse change in the significance of a unique archaeological resources (i.e., an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it contains information needed to answer important scientific research questions, has a special and particular quality such as being the oldest or best available example of its type, or is directly associated with a scientifically recognized important prehistoric or historic event or person)? (General Plan Draft MEA, Env. Resources)
- c) Disturb or destroy a unique paleontological resource or site? (General Plan Draft MEA, Env. Resources)
- d) Disturb any human remains, including those interred outside of formal cemeteries? (General Plan Draft MEA, Env. Resources)

	X		
	X		
	X		
		X	

VI. GEOLOGY AND SOILS: Would the project:

- a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (General Plan Draft MEA, Env. Hazards)

			X
ii) Strong seismic ground shaking?(General Plan Draft MEA, Env. Hazards)	X		
iii) Seismic-related ground failure, including liquefaction? (General Plan Draft MEA, Env. Hazards)	X		
iv) Landslides? (General Plan Draft MEA, Env. Hazards)	X		

b) Result in substantial soil erosion or the loss of topsoil? (General Plan Draft MEA, Env. Hazards)

	X		
c) Be located on a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction or collapse? (General Plan Draft MEA, Env. Hazards)	X		
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? (General Plan Draft MEA, Env. Hazards)	X		
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal system where sewers are not available for the disposal of waste water? (General Plan Draft MEA, Env. Hazards)		X	

VII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (General Plan Draft MEA, Env. Hazards)

		X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment? (General Plan Draft MEA, Env. Hazards)		X	
c) Reasonably be anticipated to emit hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (General Plan Draft MEA, Env. Hazards)		X	
d) Is the project located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? (Riverside County Hazardous Materials Listing)		X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? (General Plan land use map)		X	
f) For a project within the vicinity of a private airstrip; would the project result in a safety hazard for people residing or working in the project area? (General Plan land use map)			X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (General Plan Draft MEA, Env. Hazards)		X	

h) Expose people or structures to the risk of loss, injury or death involving wildlands fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? (General Plan land use map)

		X	
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VIII. HYDROLOGY AND WATER QUALITY : Would the project:

a) Violate Regional Water Quality Control Board water quality standards or waste discharge requirements? (General Plan Draft MEA, Env. Resources)

		X	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted? (General Plan Draft MEA, Env. Resources)	X		
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? (General Plan Draft MEA, Env. Resources)	X		
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? (General Plan Draft MEA, Env. Resources)	X		
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems to control? (General Plan Draft MEA, Env. Resources)		X	
f) Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? (General Plan Draft MEA, Env. Resources)	X		
g) Place within a 100-year floodplain structures which would impede or redirect flood flows? (General Plan Draft MEA, Env. Resources)	X		

IX. LAND USE AND PLANNING: Would the project:

a) Physically divide an established community? (General Plan Draft MEA, Land Use)

			X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local costal program, or zoning ordinance) adopted for the purposes of avoiding or mitigating an environmental effect? (General Plan Draft MEA, Land Use)		X	
c) Conflict with any applicable habitat conservation plan or natural communities conservation plan? (General Plan Draft MEA, Env. Resources)	X		

X. MINERAL RESOURCES: Would the project:

a) Result in the loss of availability of a known mineral resource classified MRZ-2 by the State Geologist that would be of value to the region and the residents of the state? (General Plan Draft MEA, Env. Resources)

		X	
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? (General Plan Draft MEA, Env. Resources)		X	

XI. NOISE: Would the project result in:

a) Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (General Plan Draft MEA, Env. Hazards)

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? (General Plan Draft MEA, Env. Hazards)

c) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? (General Plan Draft MEA, Env. Hazards)

d) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? (General Plan Draft MEA, Env. Hazards)

e) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive levels? (General Plan land use map)

X			
		X	
	X		
	X		
	X		

XII. POPULATION AND HOUSING: Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? (General Plan Draft MEA, Land Use)

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? (General Plan Draft MEA, Land Use)

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? (General Plan Draft MEA, Land Use)

X			
			X
			X

XIII. PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire protection? (General Plan Draft MEA, Infra. & Public Serv.)

Police protection? (General Plan Draft MEA, Infra. & Public Serv.)

Schools? (General Plan Draft MEA, Infra. & Public Serv.)

Parks? (General Plan Draft MEA, Infra. & Public Serv.)

Other public facilities? (General Plan Draft MEA, Infra. & Public Serv.)

	X		
	X		
	X		
	X		
	X		

XIV. RECREATION:

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? (General Plan Draft MEA, Parks & Recreation)

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? (General Plan Draft MEA, Parks & Recreation)

	X		
	X		

XV. TRANSPORTATION/TRAFFIC: Would the project:

a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? (General Plan Draft MEA, Circulation)

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? (General Plan Draft MEA, Circulation)

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? (General Plan Draft MEA, Circulation)

d) Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (General Plan Draft MEA, Circulation)

e) Result in inadequate emergency access? (General Plan Draft MEA, Circulation)

f) Result in inadequate parking capacity? (General Plan Draft MEA, Circulation)

g) Conflict with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)? (General Plan Draft MEA, Circulation)

X			
	X		
			X
			X
		X	
	X		
		X	

XVI. UTILITIES AND SERVICE SYSTEMS: Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? (General Plan Draft MEA, Infra. & Public Serv.)

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (General Plan Draft MEA, Infra. & Public Serv.)

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (General Plan Draft MEA, Infra. & Public Serv.)

d) Are sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? (General Plan Draft MEA, Infra. & Public Serv.)

e) Has the wastewater treatment provider which serves or may serve the project determined that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? (General Plan Draft MEA, Infra. & Public Serv.)

f) Is the project served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? (General Plan Draft MEA, Infra. & Public Serv.)

		X	
		X	
	X		
	X		
		X	
	X		

XVII. MANDATORY FINDINGS OF SIGNIFICANCE:

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? ()

b) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? ()

	X		
	X		

c) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current project, and the effects of probable future projects)? ()

d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? ()

X			
	X		

XVIII EARLIER ANALYSES.

Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, one or more effects have been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case a discussion should identify the following on attached sheets.

a) **Earlier analyses used.** Identify earlier analyses and state where they are available for review.

No earlier analyses specific to this project have been used.

b) **Impacts adequately addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

Not applicable.

c) **Mitigation measures.** For effects that are "Less than Significant with Mitigation Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

Not applicable. To be addressed in EIR.

CITY OF LA QUINTA COMPREHENSIVE GENERAL PLAN UPDATE

ADDENDUM TO ENVIRONMENTAL CHECKLIST

- I.a. Future development facilitated by the proposed General Plan has the potential to adversely impact scenic vistas of the Santa Rosa and Coral Reef Mountains as viewed from public and private lands and/or rights-of-way. Policies and programs in the proposed Plan, including comprehensive landscape programs, requirements for site-sensitive planning, implementation of the City Zoning Ordinance, and review of development plans, will limit these impacts. However, a more thorough assessment should be made.
- I.b. Grading and construction activities associated with implementation of the proposed General Plan could cause damage to scenic resources, including vegetation and rock outcroppings. A series of mitigation measures, including the architectural review process and implementation of the hillside protection ordinance, are expected to minimize these impacts. However, these issues should be further assessed.
- I.c. Continued urbanization made possible by the updated General Plan has the potential to degrade the existing visual character of the City and its surroundings. In particular, land clearing, grading and construction activity have the potential to alter existing scenic resources. These impacts are expected to be minimized through adherence to the City Zoning Ordinance and other policies and programs set forth in the Plan. Future development is expected to be compatible with current land uses. These issues should be further examined in the EIR.
- I.d. The City of La Quinta enjoys dark night skies with excellent visibility. Future development associated with the General Plan update has the potential to create substantial light and glare, from parking lot lighting, security lighting and other sources. Additional analysis in the EIR, and the development of appropriate mitigation measures, will be required to reduce these impacts to acceptable levels.
- II.a,b,c. As described in the Riverside County General Plan, some lands in the the eastern portion of the General Plan planning area are designated as Prime Farmland and Farmland of Statewide Importance. The long-term impacts of future development on these lands and on Williamson Act contracts need to be identified and evaluated in the EIR. (Source: Figure VI.34, Riverside County General Plan, revised June 3, 1993)
- III.a. Future development facilitated by the proposed Plan has the potential to emit pollutants, including particulate matter (PM10), which are subject to local and regional air quality plans. Future projects are expected to be fully compliant with applicable air quality plans; however these issues should be further evaluated. (Source: "1997 Air Quality Management Plan," South Coast Air Quality Management District)

- III.b. Development associated with buildout of the proposed General Plan could exceed air quality thresholds established by the South Coast Air Quality Management District. These impacts are expected to be mitigated through the use of energy-efficient heaters and related appliances, site watering and other measures intended to reduce the emission of fugitive dust, and the preparation of site-specific air quality analyses. However, these issues should be further examined. (Source: "CEQA Handbook," South Coast Air Quality Management District, April 1993)
- III.c. The Coachella Valley is a non-attainment area for PM10 and ozone. The grading and construction of Plan-facilitated development could result in a cumulative net increase in these pollutants. In addition, automobile traffic and stationary sources, such as air conditioners and natural gas heaters, are expected to generate air pollutants. Additional analysis is required to determine the level of impacts and recommend appropriate mitigation measures.
- III.d. Development facilitated by the proposed General Plan could potentially expose sensitive receptors, including schools and residences, to pollutant concentrations. A number of General Plan policies and programs are directed at reducing these potential impacts to insignificant levels, including thoughtful land use planning and zoning, the phasing of development projects, and the implementation of fugitive dust suppression measures. However, these issues should be discussed further in the EIR.
- III.e. Implementation of the Plan has a limited to potential to create objectionable odors which would affect a substantial number of people. Odors associated with industrial or heavy commercial land uses in particular have a potential to create objectionable odors. These potential impacts should be further evaluated.
- IV.a. Lands generally north of Avenue 50 occur in an area of wind blown sand dunes, which may support a variety of special status species, including the Coachella Valley fringe-toed lizard and Coachella Valley milkvetch. In addition, the rocky hillsides of the Santa Rosa Mountains offer habitat to the federally endangered Peninsular bighorn sheep and other sensitive species. Further analysis is required to determine which species do occur or are likely to occur in the planning area, and what mitigation measures may be needed to adequately reduce impacts to these species. (Source: "City of La Quinta, Biological Assessment," Tierra Madre Consultants, Inc. December 1999)
- IV.b. The planning area is not known to contain any significant riparian habitat or other sensitive natural communities, although it does include limited desert dry wash habitat, which may support a number of birds and other species. Impacts to these resources are expected to be limited, but they should be further evaluated in the EIR. (Source: "City of La Quinta, Biological Assessment," Tierra Madre Consultants, Inc. December 1999)
- IV.c. Federally protected wetlands are not known to occur within the boundaries of the General Plan planning area, and therefore will not be adversely impacted by adoption and implementation of the Plan. (Source: "City of La Quinta, Biological Assessment," Tierra Madre Consultants, Inc. December 1999)

- IV.d. Development facilitated by the proposed Plan may result in the establishment of insurmountable barriers which isolate native species, interfere with their migration corridors, and/or impede the use of their nursery sites. These issues should be further examined. (Source: "City of La Quinta, Biological Assessment," Tierra Madre Consultants, Inc. December 1999)
- IV.e. Future development associated with buildout of the General Plan will be carefully reviewed to assure its compliance with local policies and ordinances which protect biological resources, including the federally endangered Peninsular bighorn sheep.
- IV.f. Portions of the planning area are located within the boundaries of the mitigation fee area for, and are subject to the provisions of the Coachella Valley Fringe-toed Lizard Habitat Conservation Plan (HCP). General Plan policies and programs provide assurance that future development in the planning area will be compliant with the provisions of the HCP and any future habitat conservation plans. (Source: "City of La Quinta, Biological Assessment," Tierra Madre Consultants, Inc. December 1999)
- V.a,b. A number of important archaeological and/or historical sites are known to occur within the planning area, particularly in the vicinity of ancient Lake Cahuilla. Future development facilitated by implementation of the General Plan could conceivably lead to the alteration or destruction of cultural resources. A series of General Plan policies and programs, including the thorough review of development plans for potential impacts to cultural resources, and continued efforts at preservation, are expected to reduce potential impacts to acceptable levels. However, these issues should be further assessed in the EIR. (Source: "Cultural Preservation Element, City of La Quinta General Plan," CRM Tech, October 4, 1999, revised October 21, 1999)
- V.c. Portions of the General Plan planning area occur within the historic shoreline of ancient Lake Cahuilla, and soils in the vicinity may have a high degree of sensitivity for paleontological resources. Future development has the potential to directly or indirectly destroy these resources if not adequately mitigated. The proposed General Plan includes requirements for paleontological resource analyses for developments occurring in areas of high sensitivity, and project-specific mitigation plans, which are expected to reduce potential impacts to levels of insignificance. However, these issues should be further evaluated in the EIR. (Source: "Paleontological Resources Mitigation Plan," Section of Geologic Sciences, San Bernardino County Museum, October 1999)
- V.d. Given that the occurrence of native settlements and other cultural resource sites within the planning area, Plan-facilitated development has the potential to disturb human remains, including those interred outside of formal cemeteries. The proposed Plan supports a proactive approach to the preservation of cultural resources, and includes programs intended to reduce potential impacts to these resources. Some of these include the surveying of project sites to identify potential resources, and on-site monitoring in areas of high sensitivity. However, these issues should be addressed further. (Source: "Cultural Preservation Element, City of La Quinta General Plan," CRM Tech, October 4, 1999, revised October 21, 1999)

- VI.a.i. No active or potentially active faults are known to occur within the General Plan planning area. Therefore, the risks associated with fault rupture are not considered to be significant. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)
- VI.a.ii. The planning area is located in close proximity to two of southern California's most active fault zones, the San Andreas and San Jacinto, and implementation of the proposed General Plan could expose additional people and structures to potentially strong seismic groundshaking. General Plan policies and programs, including strict adherence to the Uniform Building Code and other applicable building standards, and the rehabilitation of unreinforced structures, are directed at minimizing these impacts. However, these issues need to be further assessed. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)
- VI.a.iii. Much of the eastern portion of the planning area may be susceptible to seismically induced ground failure, including liquefaction, and development facilitated by the proposed Plan could expose additional people and structures to such hazards. While these impacts are expected to be minimized through the application of mitigation measures, these issues should be evaluated further in the EIR. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)
- VI.a.iv. Future development at the base of the Santa Rosa and Coral Reef Mountains, where bedrock is intensely fractured or jointed, may be vulnerable to seismically induced rockfall. The proposed General Plan addresses these hazards through the requirement for site-specific geotechnical analyses in areas subject to slope instability, and continued implementation of the City Hillside Conservation Zone ordinance, which limits development on slopes. However, these issues should be addressed further in the EIR. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)
- VI.b. Development facilitated by the proposed Plan may have the potential of inducing erosion through mass grading, removing topsoil and otherwise altering surface relief and soil consolidation. These impacts are expected to be mitigated through the implementation of site-specific grading and drainage controls, and improvements that enhance local drainage conditions. These issues should be further addressed.
- VI.c. Plan-facilitated development may be constructed on unstable geologic units or soils, including manufactured slopes, alluvial fan deposits transported from the Santa Rosa Mountains, and wind-blown sands in the northern portion of the planning area. Development on these soils could potentially result in landslides, lateral spreading, liquefaction or collapse if not adequately mitigated. These impacts are expected to be minimized by locating drainage facilities and heavily irrigated areas away from

- foundations and other structural supports. However, these impacts should be examined further in the EIR. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)
- VI.d. Expansive soils are known to occur in the vicinity of ancient Lake Cahuilla. Development facilitated by the proposed General Plan which occurs on these lands may increase the risks to life and/or property. These potential hazards can be minimized through the overexcavation of soils, the use of reinforced steel in foundations, and avoidance of excessive watering. These issues should be addressed further in the EIR. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)
- VI.e. Groundwater contamination associated with discharge from septic tanks has been documented elsewhere in the Coachella Valley, and the General Plan study area may contain soils which are incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems. To minimize these potential risks, the General Plan encourages the connection of all new development to the existing sewage collection system. However, the potential impacts of Plan-facilitated development on groundwater resources should be further evaluated.
- VII.a.b. Continued urbanization facilitated by the proposed General Plan may result in new development which involves the production, storage, use and/or transport of hazardous or toxic materials. The General Plan establishes a variety of policies and programs intended to reduce the risk of a hazardous materials release, including the review of development proposals for hazardous materials sites, land use planning which assures compatibility of hazardous material operations with surrounding lands, and strict adherence to the Uniform Fire Code and other applicable hazardous materials regulations. These issues should be assessed in the EIR.
- VII.c. Development facilitated by the Plan has a limited potential to handle or emit hazardous materials in the immediate vicinity of an existing or planned school. The General Plan seeks to minimize these potential impacts through review of development applications, and thoughtful land use planning, which permits hazardous materials operations only where compatible with surrounding land uses. These issues should be further assessed in the EIR.
- VII.d. The potential for Plan-facilitated development to be located on a site which is included on a list of identified hazardous materials sites is limited. However, these issues should be further assessed. (Source: "Identified Hazardous Waste and Substance Sites," prepared by California Environmental Protection Agency, July 1992)
- VII.e. The Thermal Airport is located in the southeastern portion of the planning area, and the Bermuda Dunes Airport is located in the northeastern portion. Implementation of the General Plan will permit industrial development in the immediate vicinity of the Thermal Airport. To minimize safety hazards for people residing or working in the area, the

General Plan provides for special review of proposed industrial development in the vicinity of the airport. However, these issues should be further assessed in the EIR.

- VII.f. The planning area is not located in the immediate vicinity of a private airstrip, and therefore is not expected to have any adverse impacts in airport operations or the safety of people in the area.
- VII.g. The proposed General Plan requires that the City continue to maintain and update its Multi-Hazard Functional Plan. Future development facilitated by the Plan is not expected to interfere with this or any other adopted emergency response plan.
- VII.h. Portions of the planning area are subject to strong, sustained winds, which can increase the risks associated with urban wildfires. Development facilitated by the proposed General Plan may expose additional people and/or structures to loss, injury or death involving fires, and these impacts should be further evaluated.
- VIII.a. Urbanization which may be facilitated by the proposed General Plan is not expected to contribute substantially to violations of water quality standards or waste discharge requirements. The Plan requires that all development plans be reviewed for their potential to create surface and ground water contamination hazards. However, these potential impacts should be analyzed further in the EIR.
- VIII.b. Implementation of the Plan will facilitate additional urban development and may result in a reduction in groundwater available for use. Drawdown on the aquifer serving the City may be offset somewhat by natural recharge, the implementation of water conserving landscaping, the use of low-flush toilets and low-flow shower heads, and other water conservation efforts. However, these potential impacts should be examined and quantified, where possible, in the EIR.
- VIII.c.d. Adoption and implementation of the Plan will facilitate development which may alter existing drainage patterns and increase the rate of erosion and/or siltation in portions of the planning area. The General Plan sets forth a variety of policies and programs which are intended to limit these impacts, including the construction of on-site stormwater management improvements, and the implementation and updating of the Multi-Functional Hazard Plan, as it pertains to flooding and hydrology issues. However, these issues should be further evaluated. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)
- VIII.e. Plan-facilitated development will generate increased runoff. The proposed General Plan requires that new development retain project-generated runoff and flows from the 100-year flood on-site. Runoff is not expected to exceed the capacity of existing or planned stormwater drainage systems. Nonetheless, these potential impacts should be addressed in more detail in the EIR.
- VIII.f. Continued urbanization which may be facilitated by the proposed Plan has the potential to contribute to the further degradation of surface and/or groundwater due to increased

runoff and other possible contaminants. The development of on-site drainage improvements which implement the National Pollutant Discharge Elimination System (NPDES), and the continued connection of new and existing development to a city-wide sewage treatment system, are expected to mitigate these potential impacts. However, they should be further analyzed.

- VIII.g. Existing residential units in the vicinity of Eisenhower Drive and Washington Street, south of the La Quinta Evacuation Channel, occur within the 100-year flood plain. Implementation of the proposed Plan will facilitate the development of additional residential units in this area and may increase the exposure of people and/or structures to flooding hazards. General Plan policies and programs are directed at reducing flood-related hazards. However, these issues should be addressed further. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)
- VIII.h. The proposed Plan will facilitate the development of structures within the 100-year flood hazard area which have the potential to redirect and/or impede flows. These issues should be further examined. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)
- VIII.i. While the proposed General Plan prohibits the construction of new critical facilities within the boundaries of the 100-year floodplain, the Plan does facilitate the development of other structures in these areas, and may expose additional people and structures to flood related hazards. General Plan policies appear to adequately mitigate these potential impacts. However, these issues should be examined further. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)
- VIII.j. Portions of the planning area are located in the vicinity of the Lake Cahuilla levee system and downstream of above-ground water storage tanks. Development in these areas may be subject to the risks associated with seismically induced seiche and inundation. General Plan policies and programs are directed at minimizing these potential hazards through on-going coordination with the California Division of Dam Safety and the Coachella Valley Water District to adequately brace and baffle these facilities. However, these issues should be addressed in more detail in the EIR. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)
- IX.a. The proposed General Plan addresses future development within the City of La Quinta and the communities of Bermuda Dunes and Thermal, as well as surrounding areas. Implementation of the Plan is not expected to physically divide an established community.
- IX.b. Adoption and implementation of the proposed project will result in the updating of the City's Comprehensive General Plan, and will address future development in areas

currently under the jurisdiction of Riverside County. The goals, policies and programs set forth in the proposed Plan do not appear to conflict with other applicable land use plans or regulations, including the current City General Plan or the Riverside County Comprehensive General Plan. (Source: "City of La Quinta Comprehensive General Plan," 1992; and "Riverside County Comprehensive General Plan," revised June 3, 1993)

- IX.c. General Plan policies and programs support, and are consistent with applicable habitat conservation plans, including the Coachella Valley Fringe-toed Lizard Habitat Conservation Plan. Two other documents, currently under development or review, the Peninsular Bighorn Sheep Recovery Plan and the Coachella Valley Multi-Species Habitat Conservation Plan, may have conflicting policies or implement conflicting standards. These and other associated issues should be addressed in the EIR. (Source: "City of La Quinta, Biological Assessment," Tierra Madre Consultants, Inc. December 1999)
- X.a.b. The planning area is known to contain only limited mineral resources consisting primarily of sand and gravel deposits. Other mineral resources may occur within the Santa Rosa Mountains portion of the planning area; however, the significance of these potential deposits remains undetermined. While implementation of the Plan is not expected to have a significant adverse impact on the availability of valuable mineral resources, these issues should be further addressed. (Source: Special Report 159, "Mineral Land Classification: Aggregate Materials in the Palm Springs Production-Consumption Region," California Dept. of Conservation, Division of Mines and Geology, 1988)
- XI.a. Future development facilitated by the Plan will result in increases in construction noise and higher traffic volumes which may temporarily exceed applicable noise standards. The scope of these impacts and appropriate mitigation measures should be further evaluated in the EIR.
- XI.b. Grading and construction of future development projects in the planning area may generate temporary groundborne vibrations or groundborne noise levels. While these impacts are not expected to be excessive, they should be further assessed, and appropriate mitigation measures developed.
- XI.c.d. Development facilitated by the proposed Plan will result in temporary and permanent increases in ambient noise levels generated by increased traffic, construction activity, and the operation of stationary sources including heaters, air conditioners and ventilation equipment. These impacts appear to be adequately mitigated through General Plan policies and programs, which include land use planning that is sensitive to surrounding land uses, and the installation of noise attenuation mechanisms such as earthen berms and sound walls. However, these issues should be examined further.
- XI.e. The Bermuda Dunes Airport is not expected to generate noise levels which exceed 65 dB, and therefore will have minimal, if any, adverse effects on people residing or

working in the area. Aircraft noise generated at the Thermal Airport, however, is expected to impact a limited area to the northwest and southeast of the airport. These lands are primarily designated for industrial and low density residential development in the proposed General Plan. Potential noise impacts are expected to be adequately mitigated through the use of building setbacks, adherence to State Code requirements for airborne sound isolation in residences, and the preparation of site-specific acoustical studies, where necessary. These issues should be addressed in more detail in the EIR. (Source: Figures IV.28 and IV.36, "Riverside County Comprehensive General Plan," revised June 3, 1993)

- XI.f. The planning area is not located in the immediate vicinity of a private airstrip, and development facilitated by the Plan will not be affected by noise generated at a private airstrip.
 - XII.a. Implementation of the General Plan is likely to induce population growth in the area through the development of new homes and businesses, and through the extension of roads and other infrastructure. These potential impacts should be further evaluated in the EIR.
 - XII.b.c. Adoption and implementation of the proposed Plan will facilitate new development on largely vacant lands, and is not expected to displace substantial numbers of existing housing or residents.
 - XIII.a. Increased or expanded urbanization which may result from adoption of the proposed General Plan will increase the demand for fire protection services. Possible increases in traffic may also extend emergency response times. On-going consultation and coordination with the Riverside County Fire Department and the California Department of Forestry, careful review of development plans, and the enforcement of applicable fire codes, are expected to adequately mitigate these potential impacts. However, these issues should be further addressed in the EIR.
- Continued urbanization in the planning area may also increase the demand for police protection services. Possible increases in traffic may lengthen emergency response times. General Plan policies and programs, which include close coordination with the Riverside County Sheriff's Department to assure adequate staffing levels, and community involvement in crime prevention, are expected to mitigate potential adverse impacts. However, these issues need to be discussed further in the EIR.
- Implementation of the proposed Plan will result in new households within the planning area and an associated increase in the number of school-age children. New residences will impact the school system, and such an impact must be mitigated through the imposition of school fees.
- Development facilitated by the Plan will also impact existing parks in the planning area, and generate an increased demand for additional parks and recreation facilities. These impacts need to be further assessed.

Continued urbanization of the planning area will increase impacts to public roads and other public facilities and services. These impacts should be further analyzed in the EIR.

- XIV.a. Continued urbanization and population growth facilitated by the proposed Plan has the potential to increase the demand for existing park and recreation facilities such that the quality and quantity of existing facilities may be affected. General Plan policies and programs are directed at providing an adequate public and private parks and recreation facilities. However, these issues should be further evaluated and mitigated.
- XIV.b. The proposed Plan provides for new parks and recreation facilities, the construction of which could result in adverse environmental impacts if not properly mitigated. General Plan policies and programs are directed at minimizing these impacts, and include the installation of native, drought-tolerant landscaping, the preservation of open space and passive recreation areas, and the possible use of reclaimed water for parkland irrigation. These impacts should be addressed further.
- XV.a. Implementation and buildout of the General Plan have the potential to generate substantial increases in the number of vehicular trips and traffic movements in the planning area. These impacts need to be further evaluated and quantified, where possible.
- XV.b. It is unclear whether and to what extent buildout of the proposed General Plan could exceed established levels of service for designated roads. Alterations to existing traffic loads and circulation systems could affect these levels. General Plan policies and programs appear to adequately mitigate potential traffic impacts, and include the promotion of alternative modes of transportation, on-going consultation and coordination with Caltrans, thorough review of development plans and project-specific traffic impacts, and others. However, these potential impacts need to be further assessed and quantified, where possible.
- XV.c. While implementation of the proposed Plan could result in a limited increase in use of the Thermal and Bermuda Dunes Airports, it is not expected to result in a change in air traffic patterns or a significant increase in air traffic volumes.
- XV.d. The planning area does not contain any roadways with hidden or dangerous curves, nor does the General Plan propose any such roads. Visibility is generally high throughout the planning area. Although farm equipment may be encountered on some roads in the eastern portion of the planning area, it is a routine occurrence and is not expected to substantially increase traffic hazards.
- XV.e. Development facilitated by the proposed Plan may increase the demand for emergency response personnel and equipment, and additional traffic may increase emergency response times. The City, in conjunction with the Riverside County Fire Department and Sheriff's Department, shall review all future development plans to assure that adequate emergency access is provided to all sites.

- XV.f. Development facilitated by the proposed Plan will increase the demand for additional parking. The General Plan offers a number of mitigation measures intended to minimize these potential impacts, including development plan review, and the promotion of public transit, bicycle use, and tele-commuting to reduce the demand for parking facilities. These impacts should be further assessed in the EIR.
- XV.g. The programs and policies set forth in the proposed General Plan appear to be consistent with applicable transportation plans, including those which support alternative modes of transportation.
- XVI.a. Development facilitated by the Plan will increase the amount of wastewater generated and will require the expansion of existing wastewater collection and treatment facilities. While these impacts are not expected to exceed the requirements of the Regional Water Quality Control Board, they need to be further quantified and evaluated.
- XVI.b. Major water and wastewater system components are already in place throughout the planning area. However, continued urbanization facilitated by the proposed Plan will require new or altered systems, particularly in the southeastern portion of the planning area. These impacts should be further evaluated in the EIR.
- XVI.c. Continued urbanization facilitated by the proposed General Plan may require new storm drainage facilities or alterations to existing facilities. General Plan policies and programs appear to minimize the potential environmental impacts associated with construction of these facilities and maximize their wildlife habitat value. However, these issues should be further assessed in the EIR.
- XVI.d. Future development facilitated by the proposed Plan will increase the demand for domestic water and will contribute to a cumulative reduction in groundwater available for use. The General Plan proposes a number of mitigation measures designed to minimize potential impacts to the water supply, including the use of drought-tolerant landscaping materials, the installation of low-flush toilets and low-flow shower heads, and coordination with water districts serving the planning area to enhance opportunities for groundwater recharge. However, these impacts should be further evaluated and quantified, where possible.
- XVI.e. The Coachella Valley Water District (CVWD) provides wastewater treatment services to much of the planning area. Although CVWD is continually expanding the capacity of its wastewater treatment facilities, future development facilitated by the General Plan may require further expansion, and these potential impacts should be assessed further in the EIR.
- XVI.f. The management and disposal of solid waste is an on-going issue of concern in the Coachella Valley. Continued urbanization will result in the generation of additional volumes of solid waste. General Plan policies and programs include the installation of recycling bins in new development and other mitigation measures intended to minimize

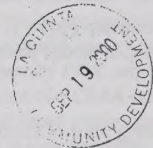
the potential impacts to landfills. The City will continue to evaluate its solid waste disposal needs as urbanization occurs. However, these issues should be assessed further.

- XVI.g Development facilitated by the proposed General Plan will generate increased volumes of solid waste. General Plan policies appear to be consistent with federal, state and local laws regarding the recycling and disposal of solid waste. However, these issues should be further evaluated.
- XVII.a Approval and implementation of the proposed Plan has the potential to substantially degrade wildlife resources and have other potentially adverse impacts on sensitive, threatened, or endangered biological species and their habitats. Similar impacts to historic and prehistoric resources also appear possible. This potential needs to be fully assessed in the EIR.
- XVII.b Implementation of the proposed General Plan may result in potentially considerable cumulative impacts to various environmental resources. However, it is unclear to what extent this may occur. This potential needs to be more fully assessed in the Program EIR.
- XVII.c It is unclear whether and to what extent the Plan will contribute to environmental effects that would cause substantial adverse effects on humans, and this potential should be more fully assessed in the Program EIR.

Bermuda Dunes

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September 18, 2000



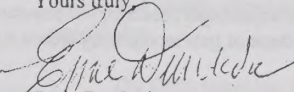
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Principal Planner
City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253

We have received a copy of your "Notice of Preparation of an Environmental Impact Report" for the City of La Quinta dated September 5, 2000.

We note that the City of La Quinta General Plan map referred to as Exhibit II shows the Community of Bermuda Dunes as a part of the City's Sphere of Influence.

Since Bermuda Dunes is not presently in the Sphere of Influence of any City we would appreciate an explanation of this reference. A correction should be sent to all parties who received the original mailing to eliminate any misunderstanding.

Yours truly


Ernie Dunlevie

ED:ms

DEPARTMENT OF FISH AND GAME

Eastern Sierra - Inland Deserts Region
4775 Bird Farm Road
Chino Hills, California 91709
(909) 597-9823

October 2, 2000

Mr. Fred Baker
City of La Quinta
78-495 Calle Tampico
P.O. Box 1504
La Quinta, CA 92253

Notice of Preparation (NOP)
for the
City of La Quinta Comprehensive General Plan
Draft Environmental Impact Report (DEIR)

Dear Mr. Baker:

The California Department of Fish and Game (Department) has reviewed the above-referenced project, relative to impacts to biological resources. The proposed project is located in the City of La Quinta in the County of Riverside. The proposed project consists of an update to its Comprehensive General Plan. The General Plan planning area includes a total of approximately 53,497 acres. A detailed assessment of existing land use designations, and a new set of land use designations will be considered in the DEIR. The update will consist of a Master Environmental Assessment, which addresses existing conditions and the level of services currently provided in the planning area, and the General Plan policy document, which includes a series of elements.

The proposed project site is located in potential habitat for a number of sensitive plant and animal species, including the state-listed Endangered and federally-listed Threatened Coachella Valley fringe-toed lizard (*Uma inornata*), federally-listed endangered and state fully-protected threatened peninsular big horn sheep (*Ovis canadensis cremnobates*), and the federally Endangered Coachella Valley milkvetch (*Astragalus lentiginosus* var. *coachellae*). Other sensitive species that may occur on the project site include, but are not limited to: flat-tailed horned lizard (*Phrynosoma mcalli*); Palm Springs ground squirrel (*Spermophilus tereticaudus chlorus*); Palm Springs pocket mouse (*Perognathus longimembris bangsi*); crissal thrasher (*Toxostoma crissale*); LeConte's thrasher (*Toxostoma lecontei*); burrowing owl (*Speotyto cucularia*); and the Coachella Giant Sand treater cricket (*Macrobates valgum*). Each of the above species is designated as a California Species of Special Concern. All of the above species, with the exception of the Coachella Valley fringe-toed lizard, are proposed for inclusion in the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP), presently under development by the Coachella Valley Association of Governments.

Mr. Fred Baker

October 2, 2000

Page 2

In connection with this project the Department will be acting as a Trustee agency for fish, plant and wildlife resources and as a Responsible Agency regarding impacts to endangered species and issuance of 1601-1603 Streambed Alteration Agreements. As such, operations which negatively affect the natural communities of California, or recreational opportunities are of concern to the Department. This project has the potential to significantly impact sensitive resources. The Department is concerned about the loss of natural systems through project activities.

To enable Department staff to adequately review and comment on the proposed project, we recommend the following information be included in the draft EIR prepared for the proposed project:

1. The affect of the General Plan on changes in habitat and species use. A thorough analysis of how the General Plan will affect groundwater, seeps, wildlife species use, aquatic and terrestrial vegetation.
2. Impacts on recreational activities such as angling and hunting opportunities. An analysis of how recreational (angling and hunting) facilities within the project area may be negatively affected by the General Plan.
3. A complete assessment of the flora and fauna within and adjacent to the project area, with particular emphasis upon identifying endangered, threatened, and locally unique species and sensitive habitats.
 - a. A thorough assessment of rare plants and rare natural communities, following the Department's May 1984 Guidelines for Assessing Impacts to Rare Plants and Rare Natural Communities.
 - b. Rare, threatened, and endangered species to be addressed should include all those which meet the California Environmental Quality Act (CEQA) definition (see CEQA Guidelines, § 15380).
 - c. The Department's California Natural Diversity Data Base in Sacramento should be contacted at (916) 327-5960 to obtain current information on any previously reported sensitive species and habitats, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code.
 - d. A complete assessment of sensitive fish, wildlife, reptile, and amphibian species. Seasonal variations in use of the project area should also be addressed. Focused species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with the Department and the U.S. Fish and Wildlife Service.

4. A thorough discussion of direct, indirect, and cumulative impacts expected to adversely effect biological resources, with specific measures to offset such impacts.
 - a. CEQA Guidelines, § 15125(a), direct that knowledge of the regional setting is critical to an assessment of environmental impacts and that special emphasis should be placed on resources that are rare or unique to the region.
 - b. Project impacts should be analyzed relative to their effects on off-site habitats. Specifically, this should include nearby public lands, open space, adjacent natural habitats, and riparian ecosystems. Impacts to and maintenance of wildlife corridor/movement areas, including access to undisturbed habitat in adjacent areas, should be fully evaluated and provided.
 - c. The zoning of areas for development projects or other uses that are nearby or adjacent to natural areas may inadvertently contribute to wildlife-human interactions. A discussion of possible conflicts and mitigation measures to reduce these conflicts should be included in the environmental document.
 - d. A cumulative effects analysis should be developed as described under CEQA Guideline, § 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.
5. A cumulative effects analysis should be developed as described under CEQA Guideline, § 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.
6. A range of alternatives should be analyzed to ensure that alternatives to the proposed project are fully considered and evaluated. A range of alternatives which avoid or otherwise minimize impacts to sensitive biological resources should be included. Specific alternative locations should also be evaluated in areas with lower resource sensitivity where appropriate.
 - a. Mitigation measures for project impacts to sensitive plants, animals, and habitats should emphasize evaluation and selection of alternatives which avoid or otherwise minimize project impacts. Off-site compensation for unavoidable impacts through acquisition and protection of high-quality habitat elsewhere should be addressed.
 - b. The Department considers Rare Natural Communities as threatened habitats having both regional and local significance. Thus, these communities should be fully avoided and otherwise protected from project-related impacts.

- c. The Department generally does not support the use of relocation, salvage, and /or transplantation as mitigation for impacts to rare, threatened, or endangered species. Department studies have shown that these efforts are experimental in nature and largely unsuccessful.
7. A California Endangered Species Act (CESA) Permit must be obtained, if the project has the potential to result in "take" of species of plants or animals listed under CESA, either during construction or over the life of the project. CESA Permits are issued to conserve, protect, enhance, and restore State-listed threatened or endangered species and their habitats. Revisions to the Fish and Game Code, effective January 1998, require that the Department issue a separate CEQA document for the issuance of a CESA permit unless the project CEQA document addresses all project impacts to listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of a CESA permit. For these reasons, the following information is requested:
 - a. Biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA Permit.
 - b. A Department-approved Mitigation and Monitoring Plan are required to satisfy the requirements for a CESA permit.
 - c. A Department-approved Mitigation Agreement and Mitigation Plan are required for plants listed as rare under the Native Plant Protection Act.
8. The Department opposes the elimination of watercourses and/or their channelization or conversion to subsurface drains. All wetlands and watercourses, whether intermittent or perennial, must be retained and provided with substantial setbacks which preserve the riparian and aquatic values and maintain their value to on-site and off-site wildlife populations.
 - a. The Department has direct authority under Fish and Game code § 1600 et seq. In regard to any proposed activity which would divert, obstruct, or affect the natural flow or change the bed, channel, or bank of any river, stream, or lake.
 - b. A discussion of potential adverse impacts from any increased runoff, sedimentation, soil erosion, and/or pollutants on streams and watercourses on or near the project site, with mitigation measures proposed to alleviate such impacts must be included.
 - c. The Department is in the process of complying with a writ of mandate issued by the Superior Court of California (Mendocino Environmental Center vs California Department of Fish and Game, Respondents, Bruce Choder, River Rat Salvage, et. al. Real Parties). The writ of mandate states:

Mr. Fred Baker
October 2, 2000
Page 5

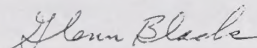
A writ of mandate shall issue ordering the California Department of Fish and Game on or before May 1, 1999, to prepare and implement a program or process that will incorporate a CEQA review into the Fish and Game Section 1603 process. The writ of mandate shall further order the California Department of Fish and Game to cease and desist entering into Section 1603 agreements after May 1, 1999, unless such agreements have been subject to a CEQA review.

The writ of mandate clearly spells out what the Department's responsibilities are under CEQA with respect to all SAA's (1601 and 1603). In this regard, the Department is emphasizing in comment letters on projects that impacts to lakes or streambeds, alternatives and mitigation measures must be addressed in CEQA-certified documents prior to submittal of an application of a SAA. Any information which is supplied to the Department after the CEQA process is complete will not have been subject to the public review requirements of CEQA. In this instance, the Department has three choices: 1) refuse to issue the SAA; 2) not file the Notification because CEQA has not been complied with and return the package to the lead agency for further CEQA action; or 3) become the lead agency.

In order for the Department to process a SAA agreement, the CEQA-certified documents must include an analysis of the impacts of the proposed project on the lake or streambed, an analysis of the biological resources present on the site, copies of biological studies conducted on the site, biological survey methodology, and a discussion of any alternative measures, avoidance measures, mitigation measures which will reduce the impacts of the proposed development to a level of insignificance.

The Department appreciates the opportunity to comment on this project. Questions regarding this letter should be directed to Ms. Teresa Newkirk, Environmental Specialist III, at (760) 251-4817.

Sincerely,



Glenn Black
Supervisor
Habitat Conservation - South
Region 6

STATE OF CALIFORNIA

Gray Davis, Governor

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
(916) 657-5390 - Fax



September 25, 2000



Fred Baker
City of La Quinta
P.O. Box 1504
La Quinta, California 92253

RE: SCH # 2000091023 - City of La Quinta Comprehensive General Plan

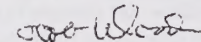
Dear Mr. Baker:

The Native American Heritage Commission has reviewed the above mentioned NOP. To adequately assess the project-related impact on archaeological resources, the Commission recommends the following action be required:

1. Contact the appropriate Information Center for a records search. The record search will determine:
 - Whether a part or all of the project area has been previously surveyed for cultural resources.
 - Whether any known cultural resources have already been recorded on or adjacent to the project area.
 - Whether the probability is low, moderate, or high that cultural resources are located within the project area.
 - Whether a survey is required to determine whether previously unrecorded cultural resources are present.
2. The final stage of the archaeological inventory survey is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - Required the report containing site significance and mitigation be submitted immediately to the planning department.
 - Required site forms and final written report be submitted within 3 months after work has been completed to the Information Center.
3. Contact the Native American Heritage Commission for:
 - A Sacred Lands File Check.
 - A list of appropriate Native American Contacts for consultation concerning the project site and assist in the mitigation measures.

Lack of surface evidence of archeological resources does not preclude the existence of archeological resources. Lead agencies should include provisions for accidentally discovered archeological resources during construction per California Environmental Quality Act (CEQA) §15064.5 (f). Health and Safety Code §7050.5 and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery and should be included in all environmental documents. If you have any questions, please contact me at (916) 653-4040.

Sincerely,



Rob Wood
Associate Governmental Program Analyst

CC: State Clearinghouse



California Regional Water Quality Control Board

Colorado River Basin Region



Gray Davis
Governor

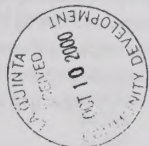
Winston H. Hickox
Secretary for
Environmental
Protection

Internet Address: <http://www.swrcb.ca.gov>
73-720 Fred Waring Drive, Suite 100, Palm Desert, California 92260
Phone (760) 346-7491 • FAX (760) 341-6820

- 2 -

October 5, 2000

Mr. Fred Baker
Principal Planner
City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253



RE: RESPONSE TO "TRANSMITTAL OF A NOTICE OF PREPARATION (NOP), CEQA INITIAL STUDY AND ADDITIONAL INFORMATION FOR THE LA QUINTA COMPREHENSIVE GENERAL PLAN UPDATE ENVIRONMENTAL IMPACT REPORT"

The NOP Transmittal dated September 5, 2000 was received in our office on September 6, 2000. The proposed project involves the assignment of new land use designations for incorporated City lands, the City Sphere-of-Influence, and an expanded planning area. The General Plan Land Use designations includes residential (very low to high density), commercial (mixed regional, community, neighborhood, tourist, village, commercial park, and office), and other uses (major community facilities, park facilities, open space, golf course, and airport).

The General Plan planning area consists of a total of approximately 53,497.7 acres, including 20,253.5 acres of incorporated City lands, 30,168.1 acres of sphere-of-influence, and other adjacent lands outside the sphere-of-influence, therefore, a stormwater permit is required. The general construction stormwater permit covers construction projects that disturb 5 acres or more of land area.

According to the NOP Transmittal, the proposed project may have the following adverse water quality impacts:

- (1) The proposed project has a potential for runoff and flooding which would create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage system controls unless mitigation measures are taken.
- (2) The proposed project may substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there will be a net deficit in aquifer volume or lowering of groundwater table unless mitigation measures are taken.
- (3) The proposed project may substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner which will result in a substantial erosion or siltation on or offsite unless mitigated.
- (4) The proposed project will substantially alter the existing drainage pattern of the site or area including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in such a manner which would result in flooding on or offsite unless mitigation is incorporated, therefore, a 401 Certification permit is required under the Clean Water Act (CWA) Section 401. The permits are issued by the U.S. Army Corps of Engineers (Corps).

(5) The proposed project will place housing within a 100-year flood plain as mapped on a Federal Flood Hazard boundary or Flood Insurance Rate Map or other Flood Hazard Delineation map unless mitigated.

(6) The proposed project involves the placement of structures within a 100-year flood plain which will impede or redirect flood flows unless mitigated.

Therefore, the Draft Environmental Impact Report must contain proposed mitigation measures that will address these aforementioned adverse water quality impacts.

If you have any questions, please call me at (760) 341-2354.

KOLA OLATUNBOSUN
Sanitary Engineering Associate

KO/jg

File: City of La Quinta Comprehensive General Plan, SCH # 2000091023, ER RIV ED



COACHELLA VALLEY UNIFIED SCHOOL DISTRICT

POST OFFICE BOX 847 THERMAL, CALIFORNIA 92274 (760) 399-5137



October 6, 2000

Mr. Fred Baker
Principal Planner
City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253

Re: Notice of Preparation
La Quinta Comprehensive General Plan Update - Environmental Impact Report

Dear Mr. Baker:

Thank you for submitting the Notice of Preparation of the Draft Environmental Impact Report for the La Quinta Comprehensive General Plan Update ("Draft EIR") to the Coachella Valley Unified School District ("District") for review and comment. As you are aware the boundaries of the District extend to the General Plan planning area.

Pursuant to the Notice of Preparation, it appears that the Draft EIR will address the effect that the General Plan Update will have on public services. Specifically, the General Plan Update proposes new land designations that are expected to result in new households within the planning area and an associated increase in the number of school-age children to be accommodated. A copy of a portion of the District's previously adopted School Facilities Needs Analysis enclosed sets forth the estimated cost per student of school facilities for the respective grade levels. The annual update to this report is being prepared and will be forwarded to you. The District anticipates that the impacts to the District as a result of the assignment of new land designations will be substantial and will be comprehensively discussed in the Draft EIR. To this end, the District will provide the City of La Quinta with information as to the average student generation rates and the District's need for additional schools based on the District's current five-year plan presently being updated. The District asks that the impacts discussed in the Draft EIR be based on this information and

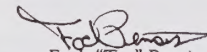
Mr. Fred Baker
Principal Planner
October 5, 2000
Page 2

that this information be included in the Draft EIR so that any discussion as to Public Services is consistent with the current needs of the District.

In regard to funding of such grade K-12 school facilities needed to accommodate the City's proposals, school fees will not provide the needed funding. Also, amounts received on a per dwelling unit basis will not allow construction to occur concurrent with need. As to State Funding, the Proposition 1A Funds are being rapidly depleted. Finally, recent litigation related to the Los Angeles Unified School District and other urban areas may result in remaining State Funding for school facilities to be diverted to those areas. Availability of State Funding to the District other than as to its currently pending K-12 Education Center is questionable.

Again, on behalf of the District, thank you for the opportunity to comment on the Notice of Preparation.

Very truly yours,


Foch "Tut" Pensis
Assistant Superintendent
Administrative Services

Enclosure

cc: Dr. Colleen Gaynes

**Coachella Valley Unified School District
Summary of Estimated Costs for Construction**

650 Student Elementary School (K-6)

Source: Prototype SAB 506B (Dated 08/04/99) for all items except Utility, Off-Site
and Service Site. The source for these items is a draft SAB 506B for the K-12 Educational Park.
Both prepared by Tritipo & Associates Architecture and Planning

A. Site		
1.*	Purchase Price of Property (10 acres @ \$7,000 per acre)	\$70,000
2.	Appraisal Fees	\$6,000
3.	Escrow Fees	\$4,500
4.	Surveys	\$1,000
5.	Site Support @ 85%	\$0
6.	Relocation Assistance	\$0
7.	Other	\$8,500
8.	Total	<u>\$90,000</u>
B. Plans		
1.	Arch/Engineering Fees for Plans	\$517,058
2.	OSA Structural/Access Compliance Plans Check Fees	\$40,812
3.	Department of Education, Plans Check Fee	\$5,012
4.	Preliminary Tests	\$10,000
5.	Other Costs - Energy Analysis	\$0
6.	Total	<u>\$572,882</u>
C. Construction		
1.*	Utility Service	\$736,230
2.*	Off-Site Development	\$231,085
3.*	Service Site Development	\$443,505
4.	General Site Development	\$607,784
5.	New Construction	\$5,567,931
6.	Unconventional Energy Sources	\$0
7.	Other - Fire Protection	\$170,000
8.	Total Construction	<u>\$7,756,536</u>
9.	Deferred Items	\$103,220
D. Tests		
		\$107,400
E. Inspection		
		\$100,000
F. Furniture and Moveable Equipment		
		\$601,686
	Total Items A through F	\$9,331,724
G. Contingencies		
		\$129,291
H.	Total Opinion of Probable Costs (Items A through G)	<u><u>\$9,461,015</u></u>

*Note: These items are the only items used to calculate the Alternative Fees.

Total Estimated Cost:	\$9,461,015
Total Number of Students:	650
Cost Per Student:	\$14,555.41

**Coachella Valley Unified School District
Summary of Estimated Costs for Construction**

1200 Student Middle School (7-8)

Source: Prototype SAB 506B (Dated 08/04/99) for all items except Utility, Off-Site
and Service Site. The source for these items is a draft SAB 506B for the K-12 Educational Park.
Both prepared by Tritipo & Associates Architecture and Planning

A. Site		
1.*	Purchase Price of Property (22.50 acres @ \$7,000 per acre)	\$157,500
2.	Appraisal Fees	\$2,600
3.	Escrow Fees	\$11,287
4.	Surveys	\$11,005
5.	Site Support @ 85%	\$0
6.	Relocation Assistance	\$0
7.	Other	\$28
8.	Total	<u>\$182,420</u>
B. Plans		
1.	Arch/Engineering Fees for Plans	\$874,227
2.	OSA Structural/Access Compliance Plans Check Fees	\$71,591
3.	Department of Education, Plans Check Fee	\$6,867
4.	Preliminary Tests	\$10,000
5.	Other Costs - Energy Analysis	\$13,500
6.	Total	<u>\$976,185</u>
C. Construction		
1.*	Utility Service	\$1,656,518
2.*	Off-Site Development	\$519,942
3.*	Service Site Development	\$997,887
4.	General Site Development	\$1,325,962
5.	New Construction	\$9,343,531
6.	Unconventional Energy Sources	\$250,000
7.	Other - Fire Protection	\$235,000
8.	Total Construction	<u>\$14,328,840</u>
9.	Deferred Items	\$235,000
D. Tests		
		\$154,000
E. Inspection		
		\$117,000
F. Furniture and Moveable Equipment		
		\$946,311
	Total Items A through F	\$16,939,756
G. Contingencies		
		\$609,219
H.	Total Opinion of Probable Costs (Items A through G)	<u><u>\$17,548,975</u></u>

*Note: These items are the only items used to calculate the Alternative Fees.

Total Estimated Cost:	\$17,548,975
Total Number of Students:	1,200
Cost Per Student:	\$14,624.15

**Coachella Valley Unified School District
Summary of Estimated Costs for Construction**

2200 Student High School (9-12)

Source: Prototype SAB 506B (Dated 08/04/99) for all items except Utility, Off-Site and Service Site. The source for these items is a draft SAB 506B for the K-12 Educational Park.
Both prepared by Trittipio & Associates Architecture and Planning

A. Site		
1.*	Purchase Price of Property (52.4 acres @ \$7,000 per acre)	\$366,800
2.	Appraisal Fees	\$6,650
3.	Escrow Fees	\$14,000
4.	Surveys	\$19,600
5.	Site Support @ 85%	\$0
6.	Relocation Assistance	\$0
7.	Other	\$1,800
8.	Total	\$408,850
B. Plans		
1.	Arch/Engineering Fees for Plans	\$1,806,568
2.	OSA Structural/Access Compliance Plans Check Fees	\$165,291
3.	Department of Education, Plans Check Fee	\$22,667
4.	Preliminary Tests	\$0
5.	Other Costs - Energy Analysis	\$0
6.	Total	\$1,994,526
C. Construction		
1.*	Utility Service	\$2,787,025
2.*	Off-Site Development	\$1,205,200
3.*	Service Site Development	\$4,519,500
4.	General Site Development	\$2,264,805
5.	New Construction	\$23,792,315
6.	Unconventional Energy Sources	\$0
7.	Other - Fire Protection	\$300,000
8.	Total Construction	\$34,868,845
9.	Deferred Items	\$700,250
D. Tests		
		\$485,700
E. Inspection		
		\$124,800
F. Furniture and Moveable Equipment		
		\$1,734,023
	Total Items A through F	\$40,316,994
G. Contingencies		
		\$571,801
H. Total Opinion of Probable Costs (Items A through G)		
		\$40,888,795

*Note: These items are the only items used to calculate the Alternative Fees.

Total Estimated Cost:	\$40,888,795
Total Number of Students:	2,200
Cost Per Student:	\$18,585.82



ESTABLISHED IN 1918 AS A PUBLIC AGENCY

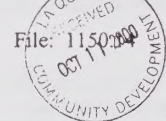
COACHELLA VALLEY WATER DISTRICT

POST OFFICE BOX 1058 • COACHELLA, CALIFORNIA 92236 • TELEPHONE (760) 398-2651

DIRECTORS
TELLIS CODEKAS, PRESIDENT
RUSSELL KITAHARA, VICE PRESIDENT
JOHN W. McFADDEN
JOHN P. POWELL, JR.
PETER NELSON

OFFICERS
THOMAS E. LEVY, GENERAL MANAGER-CHIEF ENGINEER
BERNARDINE SUTTON, SECRETARY
OWEN MCCOOK, ASSISTANT GENERAL MANAGER
REDMOND AND SHERILL, ATTORNEYS

October 6, 2000



Fred Baker
Principal Planner
City of La Quinta
78-495 Calle Tampico
La Quinta, California 92253

Dear Mr. Baker:

Subject: Notice of Preparation for the La Quinta Comprehensive
General Plan Update Environmental Impact Report

We have reviewed the above referenced document and appreciate the opportunity to comment on this important document. Our comments can be found in Attachment A.

If you have any questions please call Joe Cook, planning engineer, extension 292.

Yours very truly,

Tom Levy
Tom Levy
General Manager-Chief Engineer

Enclosure\1\as

JC:dd\eng\sw\sepb\aker

ATTACHMENT A

1. Page 19, "Water Resources" to be revised to reflect the following:

The report correctly states that the groundwater aquifer is in a state of overdraft. Coachella Valley Water District (district) requests that appropriate mitigation measures are included with the Environmental Impact Report. Such mitigation measures may include alternative water sources, water efficient landscaping, limitations on water features, domestic plumbing requirements or dual water systems to serve both potable and unpotable (irrigation) water to new developments.

2. Page 22, "Public Services and Facilities" to be revised to include the following:

The planning area which encompasses areas south and east of La Quinta encompasses five types of district facilities. These are domestic water, sanitation, stormwater, irrigation and irrigation drainage. In addition to this, much of the farmland has subsurface tile lines which are not owned and operated by the district but tie into the district's agricultural drainage system. It is important that these facilities are adequately addressed in the environmental impact report.

3. Environmental Checklist, Item VI, c. to be revised to address the following:

Land subsidence due to the overdraft of the groundwater basin may affect the structural integrity of foundations and structures.

4. Environmental Checklist, Item VIII, c. and d. to be revised to address the following:

The report acknowledges changes in the drainage patterns and rates. We encourage the city to define drainage corridors (or channels) and specific hydrology criteria to establish a design standard for new developments. Please address this in the comprehensive general plan update.



Larry Benson
Fire Chief

Proudly serving the
unincorporated
areas of Riverside
County and the
Cities of:

Banning
♦
Beaumont
♦
Calimesa
♦
Canyon Lake
♦
Coachella
♦
Desert Hot Springs
♦
Indian Wells
♦
Indio
♦
Lake Elsinore
♦
La Quinta
♦
Moreno Valley
♦
Palm Desert
♦
Perris
♦
Rancho Mirage
♦
San Jacinto
♦
Temecula

Board of Supervisors

Bob Buster,
District 1

John Tavaglione,
District 2

Jim Venable,
District 3

Roy Wilson,
District 4

Tom Mullen,
District 5

RIVERSIDE COUNTY FIRE DEPARTMENT

In cooperation with the
California Department of Forestry and Fire Protection

210 West San Jacinto Avenue • Perris, California 92570 • (909) 940-6900 • Fax (909) 940-6910

October 18, 2000

City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253

Re: Environmental Impact Report
City of La Quinta Comprehensive General Plan
Response to Notice of Preparation

Riverside County Fire Department in conjunction with the California Department of Forestry and Fire Protection is a full service organization that provides fire and other emergency services to the City of La Quinta. Currently, the city is protected by two full-time fire stations; La Quinta Station #32 located at 78136 Avenue 52 and La Quinta South #70 located at 54001 Madison Avenue. Both facilities are equipped with one ICS Class Type 1 municipal fire engine that is staffed with a minimum of two career personnel. Station 32 staffs one light rescue squad and an additional type 1 fire engine with a cadre of volunteer firefighters. Station 70 staffs a wildland fire engine with volunteers.

In the proposed General Plan Area; Thermal Station #39 located at the Thermal Airport, 56925 Tyler Street, Thermal, and Bermuda Dunes Station #31 located at 78400 Avenue 42, Bermuda Dunes. Station 39 has a minimum of two full-time personnel staffing a front-line engine similar to La Quinta's units. A third firefighter will be assigned within six years, bringing staffing to a minimum of three on duty 24 hours a day. Station 31 is an all-volunteer fire company who staffs one Type 1 municipal fire engine. There are no current plans to return this facility back to full time status.

Operationally, stations 31, 32, and 70 can generally respond and be on the scene of an incident within six minutes from time of dispatch. Station 39 has a greater, more rural





COUNTY OF RIVERSIDE
TRANSPORTATION AND
LAND MANAGEMENT AGENCY



Planning Department

Richard K. Lashbrook
Agency Director

Aleta J. Lawrence, A.I.C.P.
Planning Director

service area and can take as much as twelve minutes to get on scene.

As the area developments, cumulative impacts will adversely affect the existing level of service. Using basic county criteria, a new fire station and/or engine company should be considered for every 2000 dwelling units or 3.5 million square feet of commercial floor space. Using the Insurance Service Organization (ISO) standard, an urban community should have a fire station within three miles from any point in the city.

As the fire/emergency portion of the Public Service Element is addressed, the following issues should be considered:

1. Desired level of fire protection/emergency service.
2. Funding mechanisms to purchase facilities and equipment.
3. Funding mechanisms to maintain desired level of service, facilities, and equipment.

If you have any questions or need additional information please don hesitate to call me.

D. Andrew Avila

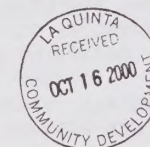
D. Andrew Avila
Deputy Fire Marshal/
Land Use Planner

SENT VIA US MAIL 10/10/00

Also faxed this date to: Nicole Sauviat Criste at:
(760) 322-2760

October 4, 2000

Mr. Fred Baker, Principal Planner
City of La Quinta Planning Department
78-495 Calle Tampico
La Quinta, CA 92253



RE: Notice of Preparation, CEQA Initial Study and Additional Information for the La Quinta Comprehensive General Plan Update Environmental Impact Report

Dear Mr. Baker:

This letter responds to the request for comments on the City of La Quinta General Plan Update that our office received September 8, 2000.

After reviewing the proposed General Plan Update the County offers the following comments:

1. The most significant change in the recommended alternative land use plan are changes to the agricultural land use designation, which was eliminated (pg. 12). Lands under the County's jurisdiction outside of the planning area are primarily agricultural and open space in nature. The Riverside County's General Plan is currently being revised, and the proposed land use designations may vary from those currently being assigned to the planning area and to surrounding lands (pg. 13). We would recommend consultation with the County on these proposed land use designations and that proposed land use designations in the City's general plan update be compatible with adjacent County land use designations and agricultural preserves, if applicable.
2. The City of La Quinta and the Coachella Valley are located within one of the most biologically unique and diverse regions in the country. Buildout of the incorporated City, its sphere of influence, and other planning area lands outside of the sphere of influence, pursuant to the Recommended Land Use Plan, has the potential to cause significant environmental impacts. The study area supports a number of sensitive species, which are listed by state and/or federal governments as endangered, threatened, or species of concern including the Coachella Valley fringe-toed lizard, desert tortoise, Le Conte's thrasher, endangered Bighorn Sheep, and Crissal thrasher (pg. 20). The City of La Quinta and other communities in the Coachella Valley are currently participating in the preparation of the Coachella Valley Multi-Species Habitat Conservation Plan (MSHCP).

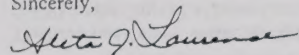
We recommend that the zoning designations in the proposed City's General Plan update be consistent with the Coachella Valley MSHCP that is currently being prepared.

3. You should be aware that on October 4, 2000, the County of Riverside conducted a community meeting in Thermal regarding the County's proposed new General Plan, and the proposed Eastern Coachella Valley Area Plan, which would replace the existing Eastern Coachella Valley Community Plan as the land use plan for the unincorporated area located east of the City of La Quinta.

Many residents and landowners from this area attended the meeting and expressed a strong desire to keep their area rural and equestrian-friendly, both to protect their rural lifestyles as well as to support the large equestrian-oriented tourism industry in the area. The City's General Plan should address this neighboring rural equestrian lifestyle, equestrian trail linkages between the County and the city, and effective methods of buffering the rural uses from adjacent, more urban uses in the city. The County looks forward to working with the City to address these issues.

Thank you for considering our comments and for giving the County of Riverside the opportunity to review the proposed General Plan Update. If you have any questions regarding our comments please call me at (909) 955-3265.

Sincerely,



Aleta J. Laurence, AICP
Planning Director

AJL/jrs

cc: Supervisor Roy Wilson, Fourth District
Richard Lashbrook, TLMA Director
Paul Clark, Planning Dept. Desert Office
Jerry Jolliffe, TLMA

F:\comment\laquinta.wpd

DEPARTMENT OF TRANSPORTATION

DISTRICT 8
464 W Fourth Street, 6th Floor MS 726
San Bernardino, CA 92401-1400
PHONE (909) 383-6327
FAX (909) 383-6890



September 18, 2000

08-Riv-111/86

Mr. Fred Baker
Principal Planner
Community Development
City of La Quinta
P O Box 1504
La Quinta, CA 92253

Dear Mr. Baker:

*Notice of Preparation of an Environmental Impact Report
La Quinta Comprehensive General Plan Update EIR*

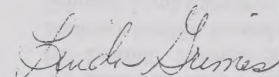
Early and continuous liaison with Caltrans on all new development is urged.

Impacts to the State Highway system should be thoroughly analyzed to assure that the level of service is maintained.

Please provide this office with the new General Plan Update when it becomes available.

If you have any question, please call Jim Belty at (909)383-4473 or FAX (909)338-6890.

Sincerely,



LINDA GRIMES, Chief
Office of Forecasting/
IGR/CEQA Review

October 5, 2000



Fred Baker, Principal Planner
City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253

RE: Notice of Preparation (NOP) of an Environmental Impact Report — City of La Quinta Comprehensive General Plan Update

Dear Mr. Baker:

The Riverside County Waste Management Department (Department) has reviewed the Notice of Preparation (NOP) for the City of La Quinta Comprehensive General Plan update. The following information is provided to assist in the preparation of a Draft Environmental Impact Report (DEIR):

Current Solid Waste Information:

1. On September 23, 1998, the California Integrated Waste Management Board approved the Riverside Countywide Integrated Waste Management Plan (CIWMP). This document (composed of the Countywide Summary Plan, the Countywide Siting Element, and the County's and each of its cities' Source Reduction and Recycling Elements, Household Hazardous Waste Elements, and Nondisposal Facility Elements) was prepared in compliance with the Integrated Waste Management Act of 1989 (AB 939, et seq.) for the purpose of defining programs and policies to reduce waste disposal by 25 percent in 1995 and 50 percent by the year 2000. This document also addresses the County's and its cities' landfill capacity needs and identifies how these disposal needs will be met over a minimum of a 15-year period. These needs are based on the amount of waste disposed at the County's landfills over the past seven years and a projection of future waste disposal. In order for the County and its cities to meet the State's mandatory goal of 50 percent reduction in waste disposal, it is important that this project participate in these efforts to reduce waste.
2. The Edom Hill Landfill is the nearest active regional landfill to the project. The Edom Hill Landfill is located in the Coachella Valley, east of Varner Road on Edom Hill Road. The existing landfill property encompasses 655 acres, of which 148 acres are permitted for landfilling. The landfill is operated by Riverside County and receives waste from the Coachella Valley. In 1997, a revision to the operating permit was approved, allowing a 40-foot vertical expansion of the landfill footprint. The permit revision allows the Edom Hill Landfill to receive an average of 1,153 tons per day and a maximum of 2,651 tons per day. During the period from July 1, 1999 to June 30, 2000, the Edom Hill Landfill received 1,254 tons per day. The estimated closure date for the landfill is 2004 based on updated information and new waste flow projections.

The Coachella Valley will lack local waste disposal capacity with the closure of the Edom Hill Landfill. Potential disposal sites in Riverside County include the proposed Eagle Mountain Landfill, located approximately 70 miles east of the Coachella Valley, or the El Sobrante, Lamb Canyon or Badlands Landfills, located in western Riverside County.

Transfer stations can be used to reduce the high cost of direct hauling waste to landfills outside the Coachella Valley. On July 5, 2000, the Coachella Valley Transfer Station, located at the closed Coachella Landfill on 87-011 44th Street northerly of Interstate 10, was opened. The Transfer Station is managed by the Coachella/Indio Waste Transfer Station Authority and operated by Burrtec Waste Industries, Inc. The facility is designed and permitted to receive a maximum of 1,100 tons per day of trash, enough to handle the Coachella Landfill's wastestream. Edom Hill Landfill is currently the disposal site for the residual waste of the transfer station.

The following is a general description of alternative landfill disposal sites in Riverside County:

Eagle Mountain Landfill and Recycling Center: The Eagle Mountain Landfill and Recycling Center, which is a private enterprise, was approved by the Riverside County Board of Supervisors on September 9, 1997. The proposed project is located in an abandoned iron ore mine at Eagle Mountain in the unincorporated area of eastern Riverside County, 10 miles northwest of the community of Desert Center. The total site acreage is approximately 4,654 acres. The total acreage of the Eagle Mountain Landfill footprint, as proposed, is 2,164 acres. The total volume of the project at ultimate build-out is 708 million tons. The landfill is expected to have a life expectancy of approximately 100 years. The proposed landfill has a reserve capacity of 2000 tons per day for County waste. The project has received 19 of its 20 permits to operate and is completing a land exchange with the Bureau of Land Management. No opening date for the facility has been set.

El Sobrante Landfill: The El Sobrante Landfill is located east of Interstate 15 and Temescal Valley Road to the south of the City of Corona and Cajalco Road at 10910 Dawson Canyon Road. The landfill is owned and operated by Waste Management, Inc. The existing landfill encompasses 178 acres, of which 90 acres are permitted for landfilling. The landfill has an overall capacity of approximately 9 million tons and a daily disposal capacity of 4,000 tons per day. During the July 1, 1999 to June 30, 2000 period, the landfill received an average of 3,010 tons per day of waste (1,700 tons per day/in-County; 1,310 tons/out-of-County).

A proposal to expand the landfill by 100 million tons (40 million tons reserved for in-County waste, and 60 million reserved for out-of-County waste) and to increase the daily disposal capacity to 10,000 tons per day was approved by the Riverside County Board of Supervisors on September 1, 1998. Under this proposal, the landfill boundary will also be expanded to encompass an additional 1,144 acres, increasing the landfill footprint area to a total of 495 acres. Upon permitting, this landfill will have sufficient disposal capacity to provide long-term disposal capacity.

Lamb Canyon Landfill: The Lamb Canyon Landfill is located between the City of Beaumont and City of San Jacinto at 16411 Lamb Canyon Road (State Route 79), with Interstate 10 to the north and

Highway 74 to the south. The landfill is owned and operated by Riverside County. The landfill encompasses approximately 1,088 acres, of which 178 acres are permitted landfill acreage. The landfill is currently permitted to receive 1,900 tons per day of trash for disposal and has an overall disposal capacity of approximately 5.9 million tons. During the July 1, 1999 to June 30, 2000 period, the landfill received an average of 488 tons per day. Based on current usage, the landfill has disposal capacity to the year 2011.

Badlands Landfill: The Badlands Landfill is located northeast of the City of Moreno Valley at 31125 Ironwood Avenue and accessed from State Highway 60 at Theodore Avenue. The landfill is owned and operated by Riverside County. The existing landfill encompasses 1,093 acres, of which 150 acres are permitted for landfilling and another 70 acres are permitted for excavation of cover material and stockpiling. The landfill is currently permitted to receive 4,000 tons per day and has an overall disposal capacity of approximately 12 million tons. During the July 1, 1999 to June 30 2000 period, the landfill received an average of 1,461 tons per day. The landfill provides long-term disposal capacity.

Comments on the NOP:

1. While the Initial Study' Environmental Checklist shows that the proposed Comprehensive General Plan (CGP) updates would create solid waste impact that is "Potentially Significant Unless Mitigated," "Public Services" in the Environmental Factors section was not checked

Topics to be addressed by the DEIR:

1. The proposed CGP updates will designate more land within the City for golf course resorts and less for residential uses. This could substantially change the composition of the City's wastestream to contain more green waste and commercial waste. The DEIR needs to address how the project will comply with the City of La Quinta's programs listed in the Source Reduction and Recycling Element and Household Hazardous Waste Element of the Coachella Valley Association of Governments.
2. The DEIR should estimate the amount of waste generated by the City under the proposed CGP, including construction and green waste, relative to the current CGP. Based on the estimates, the DEIR should discuss how the new level of waste generation by the City would be handled, in light of the eminent closure of the Edom Hill Landfill.
3. To reduce the amount of waste generated, the Department recommends that the DEIR incorporate the following mitigation measures:

The California Solid Waste Reuse and Recycling Act of 1991 requires that adequate areas for collecting and loading recyclable materials be provided in public facilities, commercial projects, business areas, multi-family residential projects with five or more units and detached, single family residential projects where solid waste is collected and loaded in a location which serves five or more units.

The project proponent is encouraged to add a mitigation measure for recycling construction waste through available methods, such as onsite grinders and use of

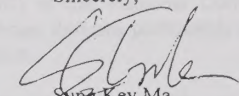
wood waste recycling facilities.

Green waste generated from the project should be reduced through such measures as grass recycling (where lawn clippings from a mulching type mower are left on the lawn), onsite composting, or green waste separation from other waste types to send to a composting facility in the area for recycling.

4. County landfills do not accept hazardous materials. The DEIR should assess the amount of household hazardous waste that would be generated by the project and how it will be disposed.

Thank you for the opportunity to review the NOP. When the DEIR becomes available, we would appreciate the opportunity to review that document. If you have any questions, please contact me at (909) 955-4386

Sincerely,



Sung Key Ma
Planner III

F:\data\p\ng\landuse\eir\2000\00-19

The Gas Company®



September 13, 2000

Gas Co. Ref. No. 00-545 OG

City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253

Attention: Fred Baker

Re: EIR – City of La Quinta General Plan Update.

Thank you for the opportunity to respond to the above-referenced project. Please note that Southern California Gas Company has facilities in the area where the above named project is proposed. Gas service to the project could be provided without any significant impact on the environment. The service would be in accordance with the Company's policies and extension rules on file with the California Public Utilities Commission at the time contractual arrangements are made.

You should be aware that this letter is not to be interpreted as a contractual commitment to serve the proposed project, but only as an informational service. The availability of natural gas service, as set forth in this letter, is based upon present conditions of gas supply and regulatory policies. As a public utility, The Southern California Gas Company is under the jurisdiction of the California Public Utilities Commission. We can also be affected by actions of federal regulatory agencies. Should these agencies take any action, which affects gas supply, or the conditions under which service is available, gas service will be provided in accordance with revised conditions.

Typical demand use for:

- | | |
|------------------------------|--|
| a. Residential | (System Area Average/Use Per Meter) Yearly |
| Single Family | 799 therms/year dwelling unit |
| Multi-Family 4 or less units | 482 therms/year dwelling unit |
| Multi-Family 5 or more units | 483 therms/year dwelling unit |

These averages are based on total gas consumption in residential units served by Southern California Gas Company, and it should not be implied that any particular home, apartment or tract of homes will use these amounts of energy.

b. Commercial

Due to the fact that construction varies so widely (a glass building vs. a heavily insulated building) and there is such a wide variation in types of materials and equipment used, a typical demand figure is not available for this type of construction. Calculations would need to be made after the building has been designed.

We have Demand Side Management programs available to commercial/industrial customers to provide assistance in selecting the most effective applications of energy conservation techniques for a particular project. If you desire further information on any of our energy conservation programs, please contact our Commercial/Industrial Support Center at 1-800-GAS-2000.

Sincerely,

John DeWitt
Technical Supervisor

Southern California
Gas Company
1981 Lugonia Avenue
Redlands, CA

Mailing Address:
Box 3003
Redlands, CA
92373-0306

SOUTHERN CALIFORNIA



ASSOCIATION of
GOVERNMENTS

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(213) 236-1825

www.scag.ca.gov

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September 18, 2000

Mr. Fred Baker
Principal Planner
City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253

RE: Comments on the Notice of Preparation for a Draft Environmental Impact Report for the City of La Quinta Comprehensive General Plan Update - SCAG No. I 20000445

Dear Mr. Baker:

Thank you for submitting the Notice of Preparation for a Draft Environmental Impact Report for the City of La Quinta Comprehensive General Plan Update to SCAG for review and comment. As areawide clearinghouse for regionally significant projects, SCAG assists cities, counties and other agencies in reviewing projects and plans for consistency with regional plans.

In addition, The California Environmental Quality Act requires that EIRs discuss any inconsistencies between the proposed project and the applicable general plans and regional plans (Section 15125 [d]). If there are inconsistencies, an explanation and rationalization for such inconsistencies should be provided.

Policies of SCAG's Regional Comprehensive Plan and Guide and Regional Transportation Plan, which may be applicable to your project, are outlined in the attachment. We expect the DEIR to specifically cite the appropriate SCAG policies and address the manner in which the Project is consistent with applicable core policies or supportive of applicable ancillary policies. Please use our policy numbers to refer to them in your DEIR. Also, we would encourage you to use a side-by-side comparison of SCAG policies with a discussion of the consistency or support of the policy with the Proposed Project.

Please provide a minimum of 45 days for SCAG to review the DEIR when this document is available. If you have any questions regarding the attached comments, please contact Jeffrey Smith, Senior Planner, at (213) 236-1867.

Thank you.

Sincerely,

SYLVIA PATSAOURAS
Interim Manager,
Performance Assessment and Implementation

September 18, 2000
Mr. Fred Baker
Page 2



COMMENTS ON THE PROPOSAL TO DEVELOP A
DRAFT ENVIRONMENTAL IMPACT REPORT
FOR THE
CITY OF LA QUINTA
COMPREHENSIVE GENERAL PLAN UPDATE
SCAG NO. I 20000445

PROJECT DESCRIPTION

The proposed Project involves the updating of the City of La Quinta's existing General Plan.

CONSISTENCY WITH REGIONAL COMPREHENSIVE PLAN AND GUIDE POLICIES

The Growth Management Chapter (GMC) of the Regional Comprehensive Plan and Guide (RCPG) contains the following policies that are particularly applicable and should be addressed in the Draft EIR for the Project.

3.01 *The population, housing, and jobs forecasts, which are adopted by SCAG's Regional Council and that reflect local plans and policies, shall be used by SCAG in all phases of implementation and review.*

Regional Growth Forecasts

The Draft EIR should reflect the most current SCAG forecasts which are the 1998 RTP (April 1998) Population, Household and Employment forecasts for the Coachella Valley Association of Governments (CVAG) subregion and the City of La Quinta. These forecasts follow:

CVAG
Subregion

Forecasts	2000	2005	2010	2015	2020
Population	372,300	412,100	450,900	497,600	551,800
Households	122,500	135,500	151,900	168,900	187,200
Employment	149,200	164,900	183,800	203,900	220,400

**City of
La Quinta**

Forecasts	2000	2005	2010	2015	2020
Population	20,400	22,700	24,900	27,500	30,500
Households	6,300	7,000	7,900	8,800	9,700
Employment	9,200	11,200	13,500	16,000	18,200

3.03 *The timing, financing, and location of public facilities, utility systems, and transportation systems shall be used by SCAG to implement the region's growth policies.*

The **Regional Transportation Plan (RTP)** also has goals, objectives, policies and actions pertinent to this proposed project. This RTP links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic and commercial limitations. Among the relevant goals, objectives, policies and actions of the RTP are the following:

Core Regional Transportation Plan Goals

1. *Meet the need for mobility and access to transportation of an increased employment and population base in the subregions and region, reduce congestion to 1990 or better levels of performance and enhance the movement of goods.*
2. *Ensure that transportation investments are cost-effective, protect the environment, promote energy efficiency and enhance the quality of life.*
3. *Serve everyone's transportation needs in a safe, reliable and economical way, including those who depend on public transit, such as the elderly, handicapped and disadvantaged.*
4. *Develop regional transportation solutions that complement subregional transportation systems and the needs of cities, communities and subregions.*
5. *Promote transportation strategies that are innovative and market-based, encourage new technologies and support the Southern California economy.*

Core Regional Transportation Plan Policies

4.01 *Transportation investments shall be based on SCAG's adopted Regional Performance Indicators:*

Mobility - *Transportation Systems should meet the public need for improved access, and for safe, comfortable, convenient and economical movements of people and goods.*

- Average Work Trip Travel Time in Minutes – 22 minutes
- PM Peak Highway Speed – 33 mph
- Percent of PM Peak Travel in Delay (All Trips) – 33%

Accessibility - *Transportation Systems should ensure the ease with which opportunities are reached. Transportation and land use measures should be employed to ensure minimal time and cost.*

- Work Opportunities within 25 Minutes – 88%

Environment - *Transportation Systems should sustain development and preservation of the existing system and the environment. (All Trips)*

- Meeting Federal and State Standards – Meet Air Plan Emission Budgets

Reliability - *Reasonable and dependable levels of service by mode. (All Trips)*

- Transit – 63%
- Highway – 76%

Safety - *Transportation Systems should provide minimal, risk, accident, death and injury. (All Trips)*

- Fatalities Per Million Passenger Miles – 0.008
- Injury Accidents – 0.929

Livable Communities - *Transportation Systems should facilitate Livable Communities in which all residents have access to all opportunities with minimal travel time. (All Trips)*

- Vehicle Trip Reduction – 1.5%
- Vehicle Miles Traveled Reduction – 10.0%

Equity - *The benefits of transportation investments should be equitably distributed among all ethnic, age and income groups. (All trips)*

- Low-Income (Household Income \$12,000)) Share of Net Benefits – Equitable Distribution of Benefits

Cost-Effectiveness - *Maximize return on transportation investment. (All Trips)*

- *Net Present Value – Maximum Return on Transportation Investment*
- *Value of a Dollar Invested -- Maximum Return on Transportation Investment*

- 4.02 *Transportation investments shall mitigate environmental impacts to an acceptable level.*
- 4.03 *Major Investment Studies and other studies of regional transportation facilities shall include consideration of freight movement.*
- 4.04 *Transportation Control Measures shall be a priority.*
- 4.06 *Implementing transit restructuring, including Smart Shuttles, freight improvements, advanced transportation technologies, airport ground access and traveler information services are RTP priorities.*
- 4.16 *Maintaining and operating the existing transportation system will be a priority over expanding capacity.*

Core Regional Transportation Plan Actions

Non-Motorized

3. *Improve or construct priority bicycle and pedestrian facilities identified in county and subregional Non-Motorized Plans.*

Transit Restructuring

18. *Work with transit operators and transportation commissions to evaluate restructuring existing services away from least performing lines towards more efficient transit services that meet the regional performance goal by the year 2010.*
19. *Work with County Transportation Commissions to document and monitor transit restructuring through the Short Range Transit Plan (SRTP) process.*

Smart Shuttles

20. *Develop a system of demand responsive transit to be implemented at major centers in the Region, providing multi-modal linkages, access within centers, and connections between centers.*

Transit Centers/Park-n-Ride Facilities

28. *Enhance transit centers, constructing new centers and providing additional park-n-ride facilities to encourage alternatives to single occupant automobiles.*

Commuter Rail

29. *Increase Metrolink service on all commuter rail lines.*

Roadways

43. *Improve arterials that serve regional needs for freight movement or provide capacity within commute sheds.*

Vanpooling

61. *Continue to support private provision of vanpool programs.*

Telecommunications

65. *Support policies and programs that facilitate individuals and business employees working at home.*
66. *Support public policies, programs, legislation, ordinance, housing designs and building permits that enables and supports self-employed and other private sector employees working at home.*

Ground Access

73. *Construct improvements on arterials, highway and rail lines to accommodate added freight and passenger movements to and from airports.*

Alternative Fuels and Clean Cities

77. *Support permitting of alternative and zero emission vehicle infrastructure and charging stations.*

GMC POLICIES RELATED TO THE RCPG GOAL TO IMPROVE THE REGIONAL STANDARD OF LIVING

The Growth Management goals to develop urban forms that enable individuals to spend less income on housing cost, that minimize public and private development costs, and that enable firms to be more competitive, strengthen the regional strategic goal to stimulate the regional economy. The evaluation of the proposed project in relation to the following policies would be intended to guide efforts toward achievement of such goals and does not infer regional interference with local land use powers.

- 3.04 *Encourage local jurisdictions' efforts to achieve a balance between the types of jobs they seek to attract and housing prices.*
- 3.05 *Encourage patterns of urban development and land use, which reduce costs on infrastructure construction and make better use of existing facilities.*
- 3.08 *Encourage subregions to define an economic strategy to maintain the economic vitality of the subregion, including the development and use of marketing programs, and other economic incentives, which support attainment of subregional goals and policies.*
- 3.09 *Support local jurisdictions' efforts to minimize the cost of infrastructure and public service delivery, and efforts to seek new sources of funding for development and the provision of services.*
- 3.10 *Support local jurisdictions' actions to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness.*

GMC POLICIES RELATED TO THE RCPG GOAL TO IMPROVE THE REGIONAL QUALITY OF LIFE

The Growth Management goals to attain mobility and clean air goals and to develop urban forms that enhance quality of life, that accommodate a diversity of life styles, that preserve open space and natural resources, and that are aesthetically pleasing and preserve the character of communities, enhance the regional strategic goal of maintaining the regional quality of life. The evaluation of the proposed project in relation to the following policies would be intended to provide direction for plan implementation, and does not allude to regional mandates.

- 3.11 *Support provisions and incentives created by local jurisdictions to attract housing*

growth in job rich subregions and job growth in housing rich subregions.

- 3.12 *Encourage existing or proposed local jurisdictions' programs aimed at designing land uses which encourage the use of transit and thus reduce the need for roadway expansion, reduce the number of auto trips and vehicle miles traveled, and create opportunities for residents to walk and bike.*
- 3.13 *Encourage local jurisdictions' plans that maximize the use of existing urbanized areas accessible to transit through infill and redevelopment.*
- 3.14 *Support local plans to increase density of future development located at strategic points along the regional commuter rail, transit systems, and activity centers.*
- 3.15 *Support local jurisdiction's strategies to establish mixed-use clusters and other transit-oriented developments around transit stations and along transit corridors.*
- 3.16 *Encourage developments in and around activity centers, transportation corridors, underutilized infrastructure systems, and areas needing recycling and redevelopment.*
- 3.17 *Support and encourage settlement patterns, which contain a range of urban densities.*
- 3.18 *Encourage planned development in locations least likely to cause environmental impact.*
- 3.19 *Support policies and actions that preserve open space areas identified in local, state, and federal plans.*
- 3.20 *Support the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals.*
- 3.21 *Encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites.*
- 3.22 *Discourage development, or encourage the use of special design requirements, in areas with steep slopes, high fire, flood, and seismic hazards.*
- 3.23 *Encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and to*

develop emergency response and recovery plans.

GMC POLICIES RELATED TO THE RCPG GOAL TO PROVIDE SOCIAL, POLITICAL, AND CULTURAL EQUITY

The Growth Management Goal to develop urban forms that avoid economic and social polarization promotes the regional strategic goal of minimizing social and geographic disparities and of reaching equity among all segments of society. The evaluation of the proposed project in relation to the policy stated below is intended guide direction for the accomplishment of this goal, and does not infer regional mandates and interference with local land use powers.

- 3.24 *Encourage efforts of local jurisdictions in the implementation of programs that increase the supply and quality of housing and provide affordable housing as evaluated in the Regional Housing Needs Assessment.*
- 3.27 *Support local jurisdictions and other service providers in their efforts to develop sustainable communities and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational facilities, law enforcement, and fire protection.*

AIR QUALITY CHAPTER CORE ACTIONS

The **Air Quality Chapter** core actions related to the proposed project includes:

- 5.07 *Determine specific programs and associated actions needed (e.g., indirect source rules, enhanced use of telecommunications, provision of community based shuttle services, provision of demand management based programs, or vehicle-miles-traveled/emission fees) so that options to command and control regulations can be assessed.*
- 5.11 *Through the environmental document review process, ensure that plans at all levels of government (regional, air basin, county, subregional and local) consider air quality, land use, transportation and economic relationships to ensure consistency and minimize conflicts.*

WATER QUALITY CHAPTER RECOMMENDATIONS AND POLICY OPTIONS

The **Water Quality Chapter** core recommendations and policy options relate to the two water quality goals: to restore and maintain the chemical, physical and biological integrity of the nation's water; and, to achieve and maintain water quality objectives that are

necessary to protect all beneficial uses of all waters.

- 11.02 *Encourage "watershed management" programs and strategies, recognizing the primary role of local governments in such efforts.*
- 11.05 *Support regional efforts to identify and cooperatively plan for wetlands to facilitate both sustaining the amount and quality of wetlands in the region and expediting the process for obtaining wetlands permits.*
- 11.06 *Clean up the contamination in the region's major groundwater aquifers since its water supply is critical to the long-term economic and environmental health of the region. The financing of such clean-ups should leverage state and federal resources and minimize significant impacts on the local economy.*
- 11.07 *Encourage water reclamation throughout the region where it is cost-effective, feasible, and appropriate to reduce reliance on imported water and wastewater discharges. Current administrative impediments to increased use of wastewater should be addressed.*
- 11.08 *Ensure wastewater treatment agency facility planning and facility development be consistent with population projection contained in the RCPG, while taking into account the need to build wastewater treatment facilities in cost-effective increments of capacity, the need to build well enough in advance to reliably meet unanticipated service and storm water demands, and the need to provide standby capacity for public safety and environmental protection objectives.*

OPEN SPACE CHAPTER ANCILLARY GOALS

Outdoor Recreation

- 9.01 *Provide adequate land resources to meet the outdoor recreation needs of the present and future residents in the region and to promote tourism in the region.*
- 9.02 *Increase the accessibility to open space lands for outdoor recreation.*
- 9.03 *Promote self-sustaining regional recreation resources and facilities.*

Public Health and Safety

- 9.04 *Maintain open space for adequate protection of lives and properties against natural and man-made hazards.*

9.05 *Minimize potentially hazardous developments in hillsides, canyons, areas susceptible to flooding, earthquakes, wildfire and other known hazards, and areas with limited access for emergency equipment.*

9.06 *Minimize public expenditure for infrastructure and facilities to support urban type uses in areas where public health and safety could not be guaranteed.*

Resource Production

9.07 *Maintain adequate viable resource production lands, particularly lands devoted to commercial agriculture and mining operations.*

Resource Protection

9.08 *Develop well-managed viable ecosystems or known habitats of rare, threatened and endangered species, including wetlands.*

CONCLUSIONS

All feasible measures needed to mitigate any potentially negative regional impacts associated with the proposed project should be implemented and monitored, as required by CEQA.

--- ENDNOTE

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

Roles and Authorities

SCAG is a *Joint Powers Agency* established under California Government Code Section 6502 et seq. Under federal and state law, SCAG is designated as a Council of Governments (COG), a Regional Transportation Planning Agency (RTPA), and a Metropolitan Planning Organization (MPO). SCAG's mandated roles and responsibilities include the following:

SCAG is designated by the federal government as the Region's *Metropolitan Planning Organization* and mandated to maintain a continuing, cooperative, and comprehensive transportation planning process resulting in a Regional Transportation Plan and a Regional Transportation Improvement Program pursuant to 23 U.S.C. §134(g)-(h), 49 U.S.C. §1607(f)-(g) et seq., 23 C.F.R. §450, and 49 C.F.R. §613. SCAG is also the designated *Regional Transportation Planning Agency*, and as such is responsible for both preparation of the Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP) under California Government Code Section 65080.

SCAG is responsible for developing the demographic projections and the integrated land use, housing, employment, and transportation programs, measures, and strategies portions of the *South Coast Air Quality Management Plan*, pursuant to California Health and Safety Code Section 40460(b)-(c). SCAG is also designated under 42 U.S.C. §7504(a) as a *Co-Lead Agency* for air quality planning for the Central Coast and Southeast Desert Air Basin District.

SCAG is responsible under the Federal Clean Air Act for determining *Conformity* of Projects, Plans and Programs to the Air Plan, pursuant to 42 U.S.C. §7506.

Pursuant to California Government Code Section 65089.2, SCAG is responsible for *reviewing all Congestion Management Plans (CMPs) for consistency with regional transportation plans* required by Section 65080 of the Government Code. SCAG must also evaluate the consistency and compatibility of such programs within the region.

SCAG is the authorized regional agency for *Inter-Governmental Review* of Programs proposed for federal financial assistance and direct development activities, pursuant to Presidential Executive Order 12,372 (replacing A-95 Review).

SCAG reviews, pursuant to Public Resources Code Sections 21083 and 21087, *Environmental Impact Reports* of projects of regional significance for consistency with regional plans [California Environmental Quality Act Guidelines Sections 15206 and 15125(b)].

Pursuant to 33 U.S.C. §1288(a)(2) (Section 208 of the Federal Water Pollution Control Act), SCAG is the authorized *Areawide Waste Treatment Management Planning Agency*.

SCAG is responsible for preparation of the *Regional Housing Needs Assessment*, pursuant to California Government Code Section 65584(a).

SCAG is responsible (with the San Diego Association of Governments and the Santa Barbara County/Cities Area Planning Council) for preparing the *Southern California Hazardous Waste Management Plan* pursuant to California Health and Safety Code Section 25135.3.

TORRES MARTINEZ
RESERVATION



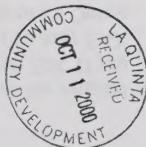
MAU-WAL-MAH
SU-KUTT MENYIL

THE TORRES MARTINEZ DESERT CAHUILLA

66-725 Martinez Road • P.O. Box 1160

Thermal, CA 92274

760-397-0300 • FAX 760-397-8146



Mr. Fred Baker
Principal Planner
City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253

October 6, 2000

Dear Mr. Baker.

After the review of the documents attached, to the notice of preparation of an environmental impact report for La Quinta City project that involves the assignment of new land use designation on incorporated City lands, the City Sphere-of-influence and an expanded planning area. We want to communicate to you, several concerns, and comments from our tribe interest.

WATER ISSUES:

In the page # 13, it is mentioned, "Several planned golf courses; which had previously not been shown on the land use map, have been included in the recommended alternative."

For The Torres Martinez Tribe, is important to know the location of this planned golf courses, and to have in the Environmental Impact Report an assessment of water usage (ground water, and under ground water) in relation to the annual water overdraft that affects Whitewater River Watershed.

We are concerned also about, the run off water with pesticides coming from the drainage systems in the planned golf courses.

For new housing development we are concern about septic tank systems and their impact in the quality of the underground water.

AIR ISSUES:

In the Tribal Reservations Lands we have a better air quality for Ozone than others part of the Coachella Valley, and our tribe will not want to have air criteria pollutants, transported to tribal land and impact our air quality.

We will recommend the inclusion in the Environmental Impact Report of an Air Emissions Inventory for the Sphere-of-Influence and the expanded planning area, to be used like a base line, to compare with future changes in the Air Quality, and for La Quinta City to considered the implementation of permits for small and mayor sources located in the industrial land areas.

We hope our environmental concerns will be addressed in the future Environmental Impact Report that your department will coordinate.

If you have any question, please contact me.

Sincerely,

Mary E. Belardo
Tribal Chairwoman.

**TRANSMITTAL MEMORANDUM
AMENDED NOTICE OF PREPARATION**

TN/City of La Quinta
GP EIR Notice of Preparation

Date: April 17, 2001

To: Responsible Agencies and Interested Parties
From: Nicole Sauviat Criste, Planning Consultant, City of La Quinta

Subject: Transmittal of Amended Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for City of La Quinta Comprehensive General Plan Update, Annexation of 5,419.9 acres and Sphere of Influence Amendment of 8,205.04 acres into the City, Riverside County, California

Enclosed please find the above referenced Amended NOP to prepare a Draft EIR for the City of La Quinta Comprehensive General Plan Update and Annexation No. 12 in Riverside County, California.

The project involves the assignment of land use designations on incorporated City lands, the City Sphere-of-Influence, an expanded planning area, a proposed amendment to the City's sphere of influence and a proposed annexation (the sphere of influence amendment and annexation are referred to herein as "Annexation No. 12"). The Notice of Preparation is your opportunity to provide comments and suggestions for issues that should be addressed in the Draft EIR. The enclosed material includes regional and vicinity maps, and the draft Land Use Designations and allocation tables.

The original Notice of Preparation was transmitted on September 5, 2000. However, since that time, the City has begun consideration of annexation No. 12. The scope of Annexation No. 12 includes 5,419.9 acres generally located east of the existing City limits, south of Avenue 52, west of Jackson Street and north of Avenue 62; the sphere of influence amendment includes 8,205.04 acres, extending from Avenue 50 on the north, Jackson Street on the west, Avenues 62 and 66 on the south, and Polk, Harrison and Van Buren Streets on the east. The City proposes to assign land use designations similar to those currently assigned by the Riverside County General Plan, with the exception of currently designated lands in the 2A, 3A and 3B categories (very low density residential) which would be assigned Low Density Residential/Agricultural Overlay under the proposed General Plan.

The NOP comment period runs from April 18 to May 18. If you commented on the original NOP and have no further comments, your original letter will be included in the Draft EIR. If you have new or additional comments, please submit them prior to April 17, 2001. You may FAX comments to the attention of Nicole Sauviat Criste, City Planning Consultant, City of La Quinta at FAX No. (760) 322-2760 within this time frame. Please also send hard copies to the City, attention Fred Baker, via mail to the address below to assure legible and reproducible originals.

Mr. Fred Baker
Principal Planner
City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253

If you have any questions regarding the enclosed or require additional information, please do not hesitate to contact me at (760) 320-9040 or Mr. Baker at the City of La Quinta (760) 777-7125.

NOTICE OF PREPARATION

OF AN

ENVIRONMENTAL IMPACT REPORT

FOR THE

**CITY OF LA QUINTA GENERAL PLAN UPDATE,
ANNEXATION NO. 12 AND SPHERE OF INFLUENCE
AMENDMENT**

IN THE

COUNTY OF RIVERSIDE, CALIFORNIA

Prepared for

**City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253**

Prepared by

**Terra Nova Planning & Research, Inc.
400 South Farrell Drive, Suite B-205
Palm Springs, CA 92262**

NOTICE OF PREPARATION

OF AN

ENVIRONMENTAL IMPACT REPORT

FOR THE

CITY OF LA QUINTA
COMPREHENSIVE GENERAL PLAN,
ANNEXATION NO. 12 & SPHERE OF INFLUENCE AMENDMENT

Introduction

The City of La Quinta, located in Riverside County, California is in the process of drafting an update to its Comprehensive General Plan and processing an annexation. The City and its consultant have been collecting a broad range of data and information pertaining to the existing physical and environmental conditions within the City and the Coachella Valley region. To further assess the characteristics of the General Plan study area, a series of special studies have been prepared, including those which address traffic and circulation, geotechnical conditions, noise, and biological and cultural resources.

Given the broad scope of the General Plan and annexation projects, a Program EIR is currently envisioned. Descriptions of the planning area and particular areas of environmental concern which will be addressed in the EIR are provided below.

Project Description

General Plan

The General Plan planning area includes a total of approximately 53,497.7 acres, including 20,253.5 acres of incorporated City lands, and 30,168.1 acres of lands in the sphere-of-influence and other adjacent lands outside the sphere-of-influence. Over the past year, City staff, the Planning Commission and City Council have held numerous meetings to discuss overall and specific goals for the community, as well as specific policies for inclusion in the General Plan policy document. A detailed assessment of existing land use designations was conducted, and a new set of land use designations has been considered in various portions of the City. A description of the proposed land use designations is provided in Table 1. Modifications to the circulation system have also been considered to address current and projected traffic volumes on major roadways.

In addition to the Program EIR, the General Plan update will consist of two separate documents: 1) the Master Environmental Assessment, which addresses existing conditions and the level of services currently provided in the planning area, and 2) the General Plan policy document, which includes a series of elements.

According to California Government Code Section 65302, a General Plan is required to include the following seven elements: Land Use, Circulation, Housing, Conservation, Open Space, Noise and

Safety. The Draft La Quinta General Plan will address each of these statutory elements, although interrelated elements may be consolidated. Additional elements to be addressed include Parks and Recreation, and Infrastructure and Public Services. Each element will include a purpose statement, a brief description of the regulatory environment and the element's relationship to other General Plan elements, and goals, policies and programs. The Housing Element will be prepared independently of the other General Plan Elements.

Proposed Annexation No. 12 and Sphere of Influence Amendment

As previously stated, the City's General Plan Update process includes a wider Planning Area which extends to the north and east of existing City limits. Since the initiation of the General Plan Update process, the City has begun research and analysis to consider annexation of a portion of the Planning Area and extension of its sphere of influence (hereinafter referred to as "annexation" or "Annexation No. 12"). In order to streamline the review process, this area has been included in the environmental analysis for the General Plan. If the annexation proceeds, the EIR will serve as the environmental compliance for the annexation actions.

The annexation area totals 5,419.9 acres, bounded on the north by Airport Boulevard, on the east by Jackson Street, on the south by Avenue 62, and on the west by the existing City limits. The area is primarily vacant desert lands and large lot residential development (ranches and scattered residential). The City's efforts to date have included the assignment of General Plan and Zoning designations for the area. These are depicted in Exhibit III; the acreage involved in the annexation area is listed, by proposed land use designation in Table 4.

The sphere of influence amendment consists of 8,205.04 acres, bounded on the north by Avenue 50, on the west by Jackson Street, on the south by Avenues 62 and 66, and on the east by Polk, Harrison and Van Buren Streets. These lands are depicted in Exhibit III, and the acreage involved is listed, by proposed land use designation, in Table 4.

Table 1
City of La Quinta Draft General Plan
Proposed Land Use Designations

Land Use Designation (Density)	Purpose of Land Use
Residential Land Uses	
Very Low Density Residential, VLDR (Up to 2 dwelling units per acre)	This designation provides for large lot single family residential development at the southeastern boundary of the City, and in the southeastern-most portions of the planning area. The designation provides a transition between agricultural lands and more intense residential uses. It encourages large lot subdivisions, and promotes the progression of land uses.
Low Density Residential, LDR (Up to 4 dwelling units per acre)	This land use designation is the most prevalent in the City and the planning area. It supports the development of single family attached and detached development, both in a country club setting and in standard subdivisions. The clustering of smaller housing units, including condominiums and townhomes, may be appropriate in this designation, with the provision of common area amenities and open space, when governed by a Specific Plan.
Medium Density Residential, MDR (Up to 8 dwelling units per acre)	This designation allows the development of single family attached and detached units on smaller lots. The Cove area of the City falls under this designation. The clustering of smaller housing units, including condominiums and townhomes, may be appropriate in this designation, with the provision of common area amenities and open space, when governed by a Specific Plan.
Medium-High Density Residential, MHDR (Up to 12 dwelling units per acre)	This designation is appropriate for both single and multiple family dwelling units, including attached and detached units on small lots, condominiums and townhomes, and apartments. The clustering of smaller housing units, including condominiums, townhomes and apartments, is appropriate in this designation, with the provision of common area amenities and open space. Mobile home parks or subdivisions with common area amenities and open space may also allowed with the approval of a Conditional Use Permit under this designation.

Table 1
City of La Quinta Draft General Plan
Proposed Land Use Designations

High Density Residential, HDR (Up to 16 dwelling units per acre)	This designation allows for attached single and multi-family dwellings. This designation is also most suitable for planned communities and affordable and senior housing where smaller units and higher densities may be appropriate. Duplex and multiplex development is the most common. Mobile home parks or subdivisions with common area amenities and open space may also allowed with the approval of a Conditional Use Permit under this designation.
Agricultural Overlay	This overlay has been applied to underlying residential designations in the southern planning area. It recognizes the importance of the agricultural community in this part of the Coachella Valley, and demonstrates the City's commitment to maintaining existing agricultural land uses. Any agricultural land use within this overlay area shall be allowed to continue until such time as the land owner chooses to develop. Agricultural land uses within this overlay area can continue as they occur at the time this General Plan is adopted.
Commercial Land Uses	
Mixed Regional Commercial (M/RC)	This land use designation supports major commercial land uses along the Highway 111 corridor, on parcels of 20 acres or more. These land uses serve not only the City, but neighboring jurisdictions as well. Land uses typical of this designation include corporate offices, non-laboratory research and development facilities, major department and specialty stores, supermarkets and drug stores, medical offices, hospitals and clinics, hotels and motels, automobile sales and commercial recreational and entertainment facilities. Smaller commercial retail facilities which support and are complementary to the primary land uses in this category are also permitted. These would include but not be limited to restaurants, services and some automobile service related land uses. High density residential land uses are permitted only if they are more than 600 feet south of Highway 111. A Specific Plan is required for all lands under this designation.

Table 1
City of La Quinta Draft General Plan
Proposed Land Use Designations

Community Commercial, CC	This designation provides for larger, community-scale shopping centers, on parcels ranging from 20 to 30 acres in size, along major arterial roadways. These centers include large scale anchors as well as a variety of retail outlets and restaurant and entertainment uses to meet the needs of multiple neighborhoods. Other typical land uses include general merchandise, hardware, food and drug stores, offices and personal services. Hotels and motels may also be appropriate within this designation.
Neighborhood Commercial, NC	This designation supports the development of commercial land uses which serve the daily needs of the adjacent neighborhood on parcels of 10 to 20 acres. Typical land uses include food and drug stores, personal services, small restaurants, and financial institutions. This designation generally occurs at arterial and major arterial intersections.
Commercial Park, CP	The typical land uses under this designation are office and light industrial: warehousing and storage, office/ warehouse combined uses, high technology light manufacturing and automobile repair.
Office, O	This designation allows for the development of professional and general offices, including financial, medical and legal offices. Retail commercial uses which support these offices may also be appropriate under this designation, but shall not be the principal use.
Resort Mixed Use, RMU	This land use designation is intended for projects which propose a wide range of potential land uses. A minimum of 80 acres is required for any project in this land use designation. Single and multi-family residential units, and condominium development are permitted in this designation, as are golf courses, and land uses permitted in the Tourist Commercial designation. Timeshares, recreational vehicle parks and resorts and mobile home parks and subdivisions may be permitted with a Specific Plan.

Table 1
City of La Quinta Draft General Plan
Proposed Land Use Designations

Tourist Commercial, TC	Uses allowed under this designation are limited to resort hotels, tourist commercial and recreational land uses, such as destination hotels, conference centers and hotels, restaurants and ancillary retail land uses. Time share projects may also be appropriate under this designation with the approval of a Conditional Use Permit. A Specific Plan is required in the Tourist Commercial designation.
Village Commercial, VC	The intent of this designation is to provide for small scale, pedestrian oriented specialty retail stores, which help create a village atmosphere. Typical land uses include art galleries, restaurants and cafes, apparel and jewelry stores and services. Medium High Density and High Density residential land uses may also be appropriate under this designation.
Other Land Uses	
Industrial, I	This land use designation is applied to lands in the planning area. It provides for business parks and the development non-polluting industrial uses operating entirely in enclosed buildings, and those requiring limited and screened outdoor storage. Examples include clean manufacturing operations, aircraft or airport related uses, warehousing and distribution facilities, mini-warehouse storage, and a variety of light manufacturing businesses. Siting industrial lands in close proximity to major regional highway and railroad facilities is also desirable. Preferred development includes master planned business and industrial parks with integrated access and internal circulation. With the approval of a Conditional Use Permit, more intense industrial uses with the potential to generate substantial levels of noise smoke, dust, glare, traffic vibration or other nuisance may also be allowed. These uses would include the manufacturing of durable goods such as appliances, furniture, fabricated metal products, and transportation equipment.

Table 1
City of La Quinta Draft General Plan
Proposed Land Use Designations

Major Community Facilities, MC	All projects proposed within this designation will mitigate any adverse environmental impacts to acceptable or insignificant levels and be compatible with existing and planned land uses. A Specific Plan is required under this designation.
Park, P	This designation is applied to existing or planned municipal, educational or public service facilities. Typical land uses within this designation include civic centers and other governmental offices, fire stations, schools and substations.
Floating Park Designation, P	This designation is applied to existing municipal and regional park facilities.
Open Space, OS	In the southern planning area, this floating designation is not assigned to a specific parcel, but indicates that a park or parks will be located in the general area in the future.
Hillside Overlay	This designation applies to lands in public or quasi-public ownership in the hillsides of the City and planning area. The designation allows the discretionary approval of trails, trailheads, and similar facilities.
Golf Course, G	This overlay is applied to lands above the toe of slope. The provisions of the Hillside Preservation Ordinance shall apply.
Watercourse/Flood Control, W	Public and private golf courses, and associated ancillary facilities.
Airport, AP	Floodways and drainage channels.
	Designates the Bermuda Dunes and Thermal airport areas.

Table 2
Statistical Summary of Land Uses
Current Comprehensive General Plans (City and County)

	City of La Quinta			Sphere & Planning Area			
Land Use Designation	Developed Acres	Vacant Acres	Total Acres	Developed Acres	Vacant Acres	Total Acres	Total Acres City & Planning Area
Residential Land Uses							
AG 1 du/10 ac.				16,152.1	3,786.3	19,938.4	19,938.4
4 0-.2 du/ac.				124.3	270.4	394.7	394.7
VLDR 0-2 du/ac.	571.5	320.1	891.6				891.6
3B 0.2-0.4 du/ac				234.0	41.1	275.1	275.1
3A 0.4-2.0 du/ac.				459.2	259.8	719.0	719.0
LDR 2-4 du/ac.	3,749.4	3,720.9	7,470.3	10.9		10.9	7,481.2
2B 2-5 du/ac.				1,153.1	1,365.1	2,518.2	2,518.2
RL 4 du/ac.				207.8	211.0	418.8	418.8
MDR 4-8 du/ac.	1,040.9	262.0	1,302.9	194.2	129.3	323.5	1,626.4
2A 5-8 du/ac.				44.4	10.4	54.8	54.8
2A MF 5-8 du/ac.				158.4	51.0	209.4	209.4
MHDR 8-12 du/ac.		14.6	14.6	336.3	128.5	464.8	479.4
RM 8 du/ac.				358.8	100.7	459.5	459.5
HDR 12-16 du/ac.	1.3	99.6	100.9				100.9
RH 15 du/ac.				102.8	85.2	188.0	188.0
Total Residential	5,363.1	4,417.2	9,780.3	19,536.3	6,438.8	25,787.1	45,635.7
Commercial Land Uses							
Land Use Designation	Developed Acres	Vacant Acres	Total Acres	Developed Acres	Vacant Acres	Total Acres	Total Acres City & Planning Area
M/RC Mixed Comm.	115.7	432.3	548.0	39.9		39.9	587.9
AP/MU Air Park/Mixed Use				69.3	14.3	83.6	83.6
CC Community Comm.	19.6	91.0	110.6				110.6
C Commercial				135.7	81.3	217.0	217.0
NC Neighborhood Comm.	54.0	20.7	74.7				74.7
CP Commercial Park	0.0	64.0	64.0				64.0
O Office	4.7	39.9	44.6	43.7		43.7	88.3
TC Tourist Commercial	166.3	106.1	272.4				272.4
VC Village Commercial	71.5	53.4	124.9				124.9
Total Commercial	431.8	807.4	1,239.2	288.6	95.6	384.2	1,623.4

	City of La Quinta			Sphere & Planning Area			
Land Use Designation	Developed Acres	Vacant Acres	Total Acres	Developed Acres	Vacant Acres	Total Acres	Total Acres City & Planning Area
Industrial Land Uses							
HI Heavy Industrial				132.0		132.0	132.0
LI Light Industrial				121.2		121.2	121.2
M Manufacturing				458.3	582.5	1,040.8	1,040.8
W/D Warehousing				47.8	17.8	65.6	65.6
Total Industrial				759.3	600.3	1,359.6	1,359.6
Other Land Uses							
MC Major Community Facilities	100.4	11.5	111.9	2.7		2.7	114.6
PF Public Facilities					36.7	36.7	36.7
School				56.6	11.3	67.9	67.9
P Park	598.0	106.3	704.3	196.7	7.8	204.5	908.8
OS Open Space	1,392.4	4,184.6	5,577.0	497.8	1,780.3	2,278.1	7,855.1
G Golf Course	2,021.0	219.0	2,240.0	625.1	126.5	751.6	2,991.6
W Watercourse	467.8	132.8	600.6				600.6
AP Airport				559.8	1,624.0	2,183.8	2,183.8
Total Other Use	4,579.6	4,654.2	9,233.8	1,938.7	3,586.6	5,525.3	14,759.1
Total Acreage	10,374.5	9,878.8	20,253.3	22,522.9	10,721.3	33,244.2	53,497.5

Table 3
Statistical Summary of Land Uses
Preferred Alternative

	City of La Quinta			Sphere & Planning Area			
Land Use Designation	Developed Acres	Vacant Acres	Total Acres	Developed Acres	Vacant Acres	Total Acres	Total Ac. City & Plan. Area
Residential Land Uses							
VLDR 0-2 du/ac.	294.3	200.8	495.1	5,231.8	1,362.2	6,594.0	7,089.1
LDR 2-4 du/ac.	3,035.8	2,978.3	6,014.2	12,445.5	4,245.0	16,690.5	22,704.7
MDR 4-8 du/ac.	1,012.2	269.7	1,281.9	740.2	291.4	1,031.6	2,313.5
MHDR 8-12 du/ac.	14.4	83.6	98.0	336.3	128.5	464.8	562.8
HDR 12-16 du/ac.	1.9	92.1	94.0	102.8	85.2	188.0	282.0
Total Residential	4,358.6	3,624.5	7,983.2	18,856.6	6,112.3	24,968.9	32,952.1
Commercial Land Uses							
M/RC Mixed Commercial	87.9	309.0	396.9	109.2	14.3	123.5	520.4
CC Community Comm.	24.2	121.3	145.5	263.4	75.0	338.4	483.9
NC Neighborhood Comm.	56.6	55.3	111.9	80.8	11.3	92.1	204.0
CP Commercial Park	0.00	64.0	64.0	—	—	—	64.0
O Office	0.00	39.9	39.9	43.7	—	43.7	83.6
TC Tourist Commercial	328.3	178.7	507.0	—	—	—	507.0
VC Village Commercial	58.2	43.9	102.1	31.4	—	31.4	133.5
Total Commercial	555.2	812.1	1,367.3	528.5	100.6	619.2	1,996.4
Other Land Uses							
I Industrial	—	—	—	1,199.0	748.0	1,947.0	1,947.0
MC Major Community Facilities	179.4	12.1	191.5	59.4	48.0	107.4	298.9
P Park Facilities	598.0	118.9	716.9	196.7	7.8	204.5	921.4
OS Open Space	1,215.2	4,234.7	5,450.0	497.8	1,954.1	2,451.9	7,901.9
G Golf Course	2,999.2	943.7	3,942.9	625.1	126.5	751.6	4,694.5
W Watercourse	468.9	132.8	601.7	—	—	—	601.7
AP Airport	—	—	—	559.8	1,624.0	2,183.8	2,183.8
Total Other Use	5,460.7	5,442.2	10,903.0	3,137.8	4,508.4	7,646.2	18,549.2
Total Acreage	10,374.5	9,878.8	20,253.5	22,522.9	10,721.3	33,244.2	53,497.5

Table 4
Statistical Summary of Land Uses
Proposed Annexation Area

General Plan Land Use Designation	Annexation No 12			Sphere of Influence Amendment		
	Developed Acres	Vacant Acres	Total Acres	Developed Acres	Vacant Acres	Total Acres
Very Low Density Residential	--	--	--	67.48	0.97	68.45
Low Density Residential	357.99	222.63	580.62	218.63	210.98	429.61
Low Density Residential/Agricultural Overlay	2,700.22	579.4	3,279.62	5,011.0	639.63	5,650.63
Medium Density Residential	194.15	129.32	323.47	358.81	100.27	459.08
Medium High Density Residential	336.34	128.46	464.8	--	--	--
High Density Residential	7.18	13.16	20.33	93.67	71.18	164.85
Neighborhood Commercial	56.43	2.45	58.89	--	--	--
Community Commercial	--	--	--	211.81	32.33	244.14
Mixed Regional Commercial	39.91		39.91	69.12	14.28	83.4
Commercial Office	--	--	--	43.72	--	43.72
Industrial	--	--	--	323.08	60.47	383.55
Major Community Facilities	31.72	10.71	42.43	--	36.67	36.67
Golf Course	428.87	126.46	555.33	--	--	--
Open Space		44.50	44.50	492.91	148.04	640.95
Park	7.18	2.83	10.01	--	--	--
Total	4,159.98	1,259.93	5,419.9	6,890.24	1,314.8	8,205.04

Source: Aerial Information Systems, April, 2001

Current Land Use Designations

The General Plan planning area includes lands within the incorporated limits of the City of La Quinta, lands within its sphere-of-influence, and unincorporated lands outside the sphere-of-influence, which are collectively referred to as the "planning area." The current land use pattern in the City of La Quinta is representative of the low density, resort residential communities found in the Coachella Valley. The City is generally bounded on the west by Washington Street and the slopes of the Santa Rosa Mountains; on the north by Fred Waring Drive; on the east by Jefferson Street and Monroe; and on the south by the Santa Rosa Mountains. The remainder of the planning area generally consists of two regions: the Bermuda Dunes area, located between Washington and Jefferson Streets to the west and east, respectively, and Fred Waring Drive and Interstate 10 to the

south and north, respectively; and the Thermal area, which abuts the southeastern portion of the City, and extends to Highway 86 on the east, between Airport Boulevard and Avenue 66 on the north and south, respectively. The boundaries of the planning area are illustrated in Exhibit II.

Residential development in the City consists primarily of low density detached and attached single family dwellings in standard subdivisions, gated communities and country club developments. The Cove area of the City represents the oldest residential development, and occurs on smaller lots in a standard street grid. Some multi-family development has occurred in the City, but does not represent a significant percentage of the residential development in the community. Residential land uses represent 48% of all land uses in the City, and 64% of land uses in the City, its sphere of influence, and its planning area. Further analysis shows that 90% of the residential lands within the planning area are at densities of 4 units to the acre or less. In the planning area, 53% of the residential lands are in agriculture. All of the agriculturally designated lands are in the Thermal planning area. Medium and high density land use designations total 3,118.4 acres in the entire planning area, which represents 10% of all residential lands, and 6% of all land uses.

There are currently 1,239± acres of commercially designated lands within the City limits, and 1,613± in the entire planning area. This represents 6% of lands within the City, and 3% of lands within the entire planning area. The land uses permitted in the commercial designations provide for a broad range of development ranging from office to regional commercial.

There are no industrially designated lands within the City limits currently. In the planning area, 1,359.7 acres are currently designated, primarily adjacent to the Bermuda Dunes and Thermal airports. Industrial designations represent 3% of all lands in the planning area. The industrial land uses range from warehousing to heavy industrial in nature.

The balance of land uses in the City, its sphere and its planning area include public and quasi-public development, representing 199 acres and 0.4% of all lands; parks, with 909 acres or 2% of all lands; open space, with 7,855 acres or 15% of all lands; golf courses, totalling 2,992 acres or 6% of all lands; watercourse, with 601 acres or 1% of all lands; and airports, with 2,184 acres or 4% of all lands.

Proposed Annexation No. 12 and Sphere of Influence Amendment

Land uses within the proposed annexation area are primarily residential and agricultural in nature, generally unconsolidated. Lands in the northern portion of the annexation area are designated by Riverside County for Agriculture, very low density residential (3A and 3B, allowing 0.4-2 and 0.2-0.4 units per acre, respectively) and low density residential (2B, allowing 2-5 units per acre) on the west side of Jackson Street, south of Avenue 54. Two school sites and a park are also located within Annexation No. 12, totalling 40 acres and 10 acres, respectively. In the southwestern corner of the annexation area is the Coral Mountain Specific Plan project, approved by Riverside County for medium to high density residential (8 to 12 units per acre) and golf course development. The project is as yet undeveloped. Limited commercial lands have been designated by the County in the Coral Mountain Specific Plan.

Within the Sphere of Influence Amendment area, lands under County jurisdiction are primarily designated Agriculture, with the exception of small areas of residentially designated lands, 2B and 3A, in the northernmost portion of the area. Small areas of Commercial and Manufacturing designated lands are also part of the sphere of influence amendment area. The Kohl Ranch Specific Plan, an approved Plan in Riverside County, is located at the southeastern corner of the sphere of influence amendment area. The Specific Plan includes Low, Medium and High density residentially designated lands, commercial and industrial lands, and open space. The Specific Plan is as yet undeveloped.

Recommended Alternative Land Use Plan

The fundamental character of the City will not be altered by the changes in the land use designations and acreages proposed by the Recommended Alternative. Land use designations in the planning area have been incorporated into existing City land use designations. In the planning area, the most significant change is represented in the agricultural land use designation, which has been eliminated. Lands currently in the agricultural designation have been assigned a low density residential land use designation, with an agricultural overlay. The City's use element policies and land use map provide for the protection of agriculturally designated lands, until such time as the land owner wishes to develop a more intense land use.

Commercial land use designations are also not proposed to change significantly under the recommended alternative. All land use assignments are depicted in Table 3, above. A single land use designation has been added -- Resort Mixed Use -- which has not been assigned to specific parcels. The land use designation was created to allow for mixed use projects which combine golf, hotel, time share and residential land uses on large parcels. Its assignment will be requested by land owners who wish to apply its standards to their properties in the future.

All the industrial land use designations have been combined into one Industrial designation, which shall allow a wide range of such land uses. The requirement for a Specific Plan of Land Use would be required for Industrially designated lands. Other land uses remain essentially as they currently occur.

Several planned golf courses, which had previously not been shown on the land use map, have been included in the recommended alternative.

Proposed Annexation No. 12 and Sphere of Influence Amendment

The City's proposed land use and zoning designations for the annexation area would place equivalent land use designations on all lands within the annexation, with the exception of those lands currently designated 2B, 3A and 3B, which would be assigned the Low Density Residential/Agricultural Overlay. Those lands designated for parks and school in the County General Plan would be assigned the equivalent Park and Major Community Facilities designation, respectively. Neighborhood Commercial designations are proposed for all four corners of Monroe and Avenue 58, and for 10 acres on the east side of Monroe, south of Airport Boulevard. Community Commercial lands are proposed for the west side of Harrison Street, adjacent to the airport. Lands approved for Specific Plans by the County, namely the Coral Mountain and Kohl Ranch Specific Plans, would be assigned equivalent designations reflecting the Specific Plan approvals. All land use designations proposed in the annexation area are consistent with those proposed in the Draft General Plan for these lands.

Surrounding Land Uses

A number of jurisdictions surround the City, including the cities of Palm Desert and Indian Wells to the west, the County of Riverside on the north, east and south, and the cities of Indio and Coachella on the east. Lands to the west are generally designated for residential and commercial land uses, as are lands to the north of the City. Lands in Indio to the east are primarily commercial, while lands in Coachella are residential and commercial in nature. Lands under Riverside County's jurisdiction outside the planning area (discussed above under Current Land Use) are primarily agricultural and open space in nature.

As a rule, lands to the west and north of the City, its sphere and its planning area are more urban, while lands to the east and south are more rural. This pattern can be expected to continue for the short to mid term. The Riverside County General Plan is currently being revised, and new land use designations may vary from those currently assigned to planning area and surrounding lands.

The City is generally bounded on the south and west by the steep slopes and foothills of the Santa Rosa Mountains, which form the southern boundary of the larger Coachella Valley. The Coral Reef Mountains extend north from the Santa Rosas into the central portion of the City and physically constrain development in this area. Much of the land within the Santa Rosa Mountains is publicly owned, and is preserved as open space and targeted for conservation.

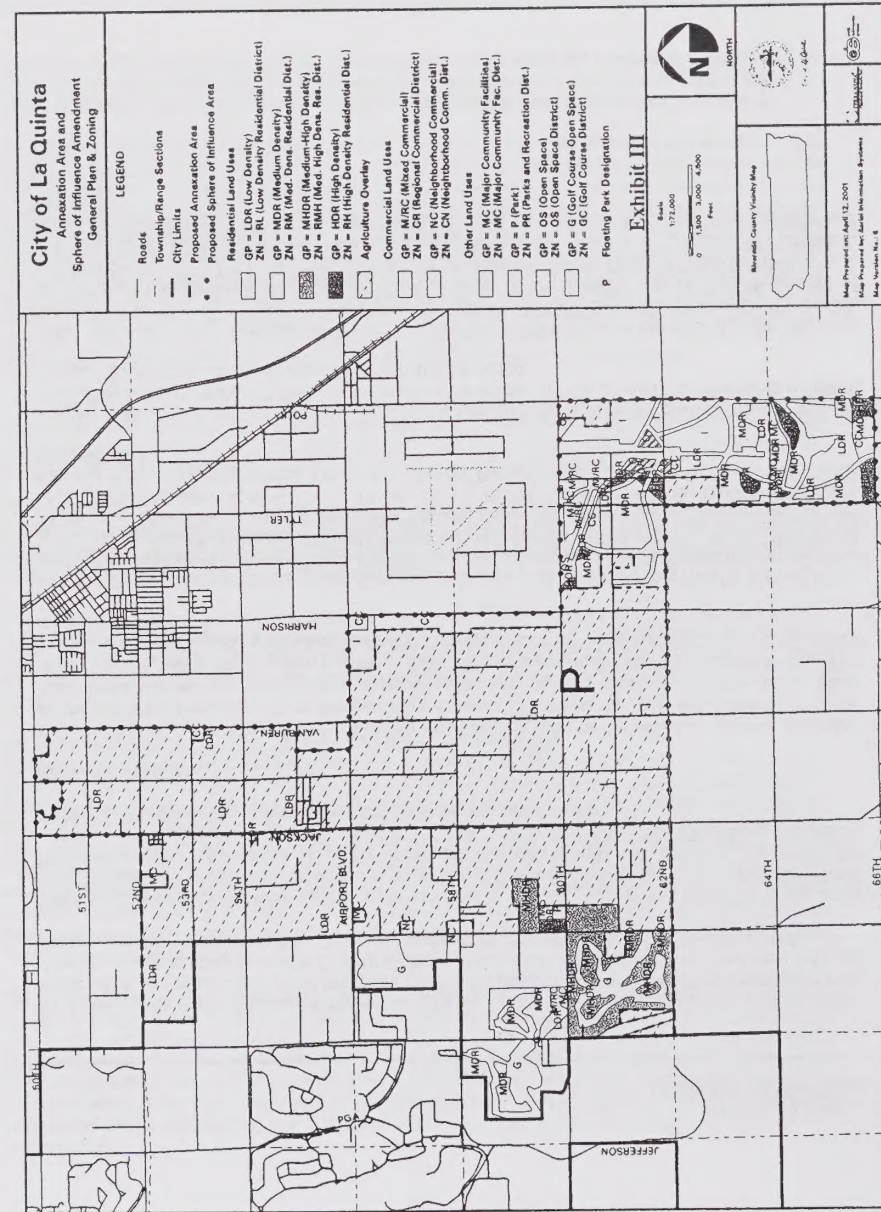
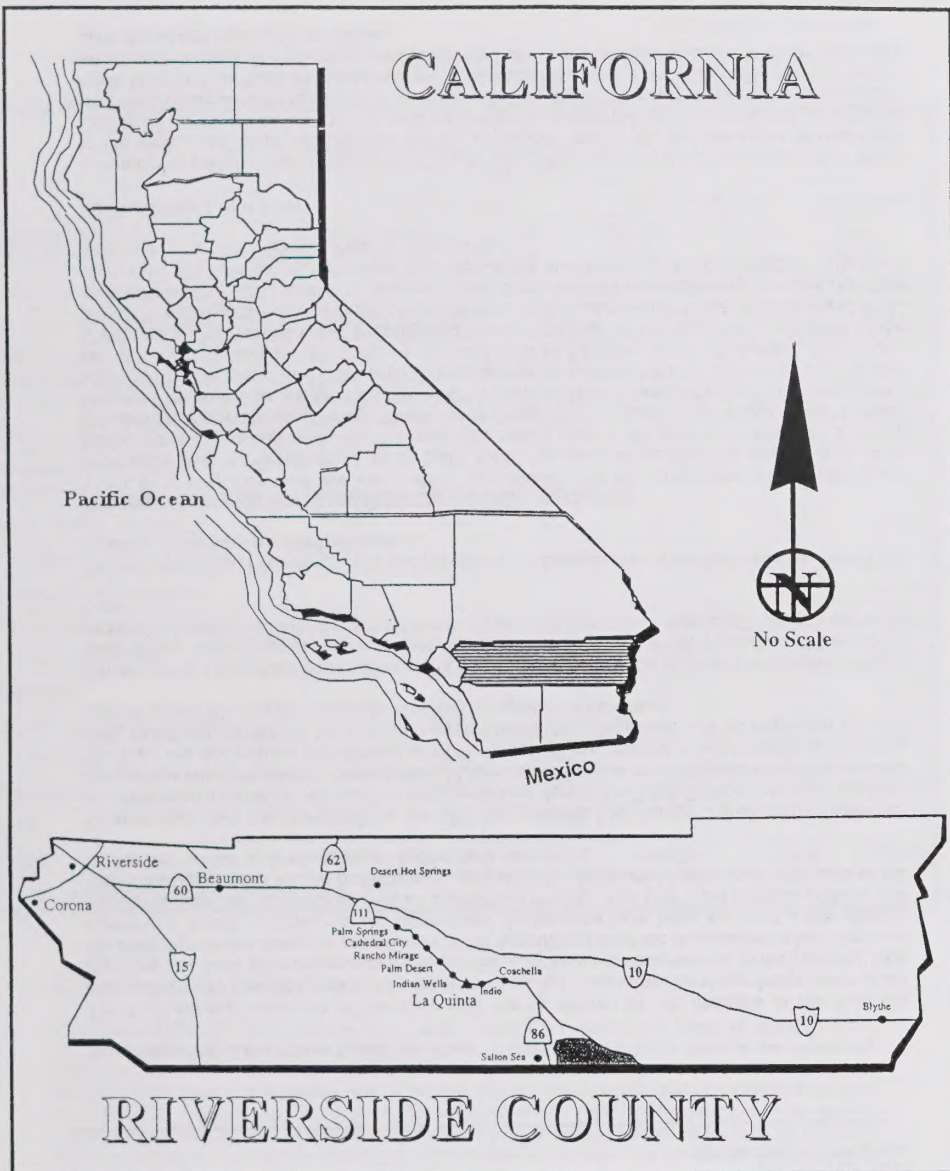
Project Location

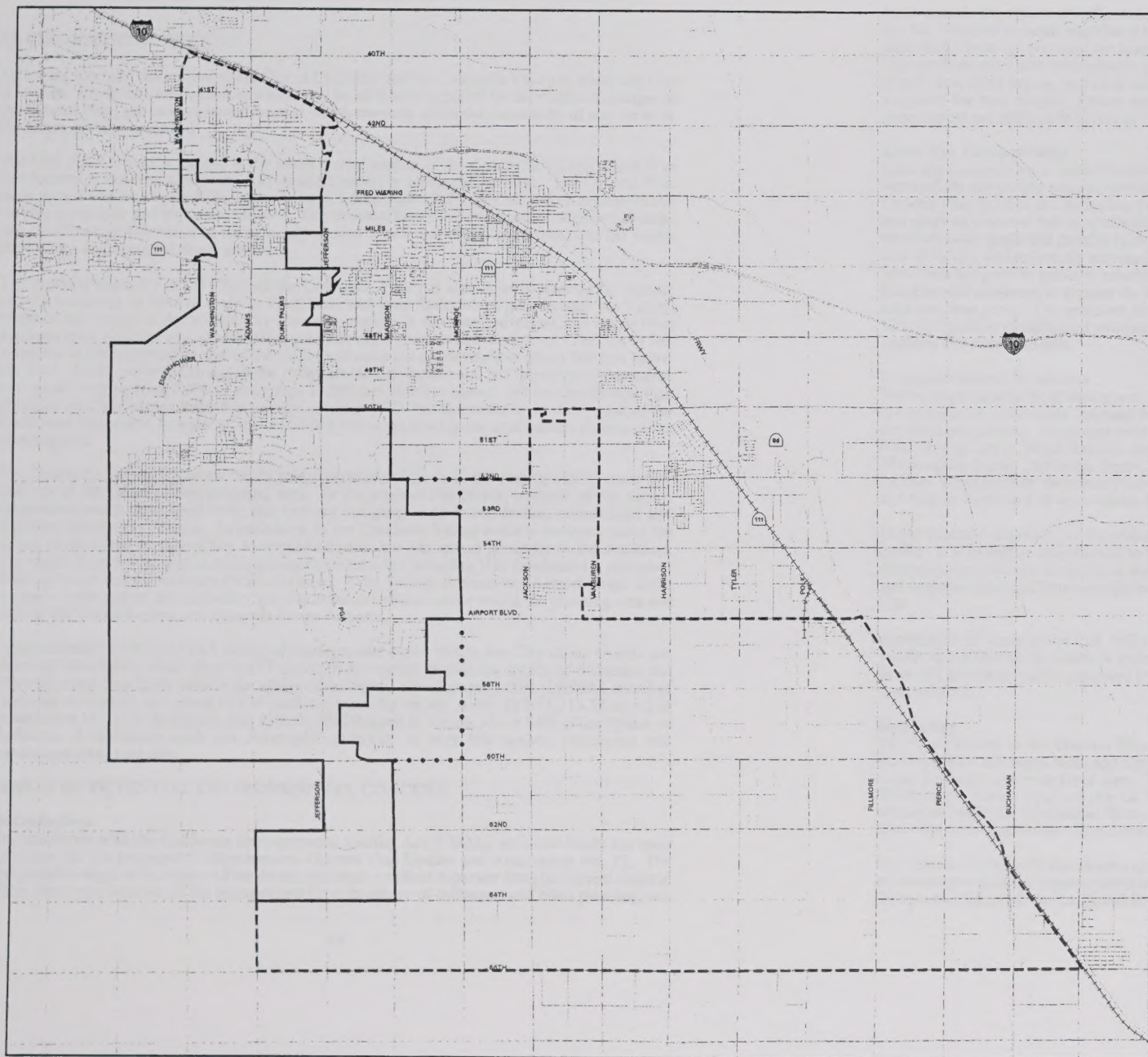
The boundaries of the General Plan planning area can generally be described as follows: bounded on the north by Interstate-10, on the south by Avenue 66, and on the west and southwest by the Santa Rosa Mountains. The southern portion of the planning area is bounded on the east by State Highway 111, while the northern portion is generally bounded on the east by Monroe Street. The boundaries of the planning area are illustrated in Exhibit II, below. The Annexation Area boundary is shown in Exhibit III.

The incorporated City limits of the City of La Quinta can be more specifically described as including: portions of Section 25 and all of Section 36, Township 5 South, Range 6 East; Sections 1, 12, 13, 24, and 25, Township 6 South, Range 6 East; portions of Sections 18, 19, 20, 28, 29, and 30, and all of Sections 31 and 32, Township 5 South, Range 7 East; portions of Sections 10, 22, and 28, and all of Sections 4, 5, 6, 7, 8, 9, 15, 16, 17, 18, 19, 20, 21, 29, 30 and 33, Township 6 South, Range 7 East; Sections 4 and 5, Township 7 South, Range 7 East of the San Bernardino Baseline and Meridian.

Sphere-of-influence and Annexation No. 12 lands include the following: portions of Section 18, Township 5 South, Range 7 East; and portions of Sections 10, 22, 27 and 28, Township 6 South, Range 7 East of the San Bernardino Baseline and Meridian.

Other planning area, Annexation No. 12 and Sphere of Influence Amendment lands include: portions of Sections 6, 7, 8, 16, 17, 18, Township 5 South, Range 7 East; Sections 23, 24, 25, 26, 33, 34, 35, 36, Township 6 South, Range 7 East; portions of Sections 22, 23, 26, 35, 36, and all of Sections 19, 20, 21, 27, 28, 29, 30, 31, 32, 33, 34, Township 6 South, Range 8 East; Sections 1, 2, 3, 8, 9, 10, 11, 12, Township 7 South, Range 7 East; portions of Sections 1, 6, 7, and all of Sections 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, Township 7 South, Range 8 East of the San Bernardino Baseline and Meridian.





City of La Quinta General Plan

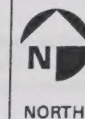
Exhibit II

LEGEND

- Roads
- Township/Range Sections
- Railroads
- City Limits
- General Plan Planning Area
- City Sphere of Influence

Scale
1:90,000

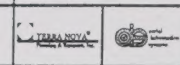
0 6,250 12,500 18,750
Feet



Riverside County Vicinity Map



Map Prepared on: July 10, 2000
Map Prepared by: Aerial Information Systems
Map Version No.: 5



ENVIRONMENTAL SETTING

Following is a brief description of the City of La Quinta and the Coachella Valley in which the City is located. Environmental resources which may be adversely impacted by the proposed changes to the General Plan, and environmental hazards which currently affect the community of may do so in the future, are also described.

The City of La Quinta is located in the south central portion of the Coachella Valley, which is in turn located in the central portion of Riverside County, in southern California. The General Plan study area is contained within the Salton Trough, a fault-controlled valley basin with expansive and varying geography and biological habitats. This Sonoran Desert environment is comprised of large and smaller scale alluvial fans, rocky/sandy washes which drain local mountains, and the valley floor which contains sand dunes and fields.

The physical character of the City and the Coachella Valley is significantly affected by seismic activity occurring on the San Andreas Fault Zone and other faults which pass through the Valley. Regional topography is characterized by extreme variations in elevation and terrain, and ranges from a sub-sea level geologic sink to mountain peaks that rise two miles above sea level. The Salton Sea is located at the southeastern end of the valley and occurs at an elevation of about 288 feet below sea level. At the northwestern end of the valley are the San Jacinto and San Bernardino Mountains, with peaks ranging from 9,600 to more than 11,500 feet above sea level. Within the General Plan planning area, elevations range from a high of about 1600 feet above sea level at the peak of the Coral Reef Mountains, to a low of about 190 feet below sea level in the southeastern portion of the planning area.

The Coachella Valley is known for its prime agricultural lands in the eastern valley, including portions of the General Plan planning area. In the western and central portions of the valley, agriculture which developed early this century has given way to residential, commercial and exclusive resort development. Urbanization in the Coachella Valley initially occurred along the slopes of the Santa Rosa and San Jacinto Mountains, but has spread primarily to the southeast. The region is served by several major transportation arteries, including U.S. Interstate-10, numerous state highways and the Southern Pacific Railroad. Palm Springs International Airport serves as the region's major airport, but secondary general aviation facilities occur within the planning area and include the Desert Resorts and Bermuda Dunes Airports.

Approximately 51% (10,374.5 acres) of incorporated lands within the City of La Quinta are currently developed, while about 9,879 acres remain vacant. Within the sphere-of-influence and other planning area lands outside the sphere-of-influence, approximately 66% (19,989.1 acres) of lands are developed, and about 10,179 acres are currently vacant. About 78% (4,213.32 acres) of Annexation No. 12 is developed, and 22% (1,206.59 acres) is vacant. About 84% of the Sphere of Influence Amendment lands are developed, primarily in very low density residential and ranch/equestrian land uses.

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

Introduction

In accordance with the California Environmental Quality Act (CEQA), an Initial Study has been prepared for the proposed Comprehensive General Plan Update and Annexation No. 12. The proposed changes to the General Plan do not constitute a radical departure from the current General Plan. However, buildout of the incorporated City, its sphere-of-influence, and other planning area

lands outside the sphere-of-influence, pursuant to the Recommended Alternative Land Use Plan, has the potential to cause significant environmental impacts. Several areas of concern have been identified where the potential for impacts to important environmental resources exists, and where impacts from environmental hazards may affect the community. Each of these areas of concern is briefly described below, and each will be addressed in greater detail in the Program EIR being prepared for this project. Please note that Annexation No. 12 and the Sphere of Influence Amendment are referred to herein as "Annexation No. 12."

Land Use Compatibility

Land use compatibility is critical to developing an effective and responsive General Plan update, and successfully integrating existing development in Annexation No. 12. The Land Use Element of the General Plan clarifies and addresses most of the concerns regarding the community's development and plays an essential role in synthesizing land use issues. The proposed land use plan is meant to establish basic goals and policies relevant to a low to medium density community, with a balanced mix of locally and regionally serving land uses. Patterns of land use and open space preservation have been assigned to preserve existing neighborhoods and sensitive open space lands. The Land Use Element continues to support the logical and staged expansion of public infrastructure and the land uses they serve. The proposed land use pattern for both the General Plan and Annexation No. 12 is designed to complement existing patterns, while also enhancing the functional and aesthetic qualities of future land uses.

Transportation/Circulation

Traffic circulation in the planning area and Annexation No. 12 is governed to a significant extent by the geographic constraints imposed by the Santa Rosa and Coral Reef Mountains and existing development patterns. Major east-west conveyance is achieved primarily along State Highway 111, Fred Waring Drive, 42nd Avenue, and Airport Boulevard. Major north-south arterials include Washington Street, Jefferson Street, and Monroe Street. In Annexation No. 12, Monroe and Jackson Street provide the primary north-south throughways, while Avenues 52, 54, 58, 60 and 62 and Airport Boulevard all are available for east-west travel.

Major roadway segments in the planning area are likely to be substantially impacted by future traffic. It is essential that impacts to the roadway system be thoroughly analyzed to assure that roadways can continue to operate at acceptable levels as the planning area builds out. The need for and appropriateness of future design modifications and mitigation measures will be assessed in the EIR.

Annexation of lands to the City will not immediately have an impact on the circulation system, insofar as no new development is immediately planned for this area. As the area develops and re-develops, however, traffic generated by this area will need to be integrated into the planning area-wide network.

Hydrology

The flood hazard in the General Plan planning area is related primarily to storm flooding and drainage from the Santa Rosa and Coral Reef Mountains. Limited portions of the planning area occur within the 100-year flood zone. These include lands in the vicinity of Eisenhower Drive and Washington Street, south of the La Quinta Evacuation Channel. The 100-year flood is also contained within the Whitewater River, the La Quinta Evacuation Channel, and a series of channels, dikes and detention basins which surround the Cove neighborhood.

The Coachella Valley Water District and the City of La Quinta have participated in the construction of stormwater drainage improvements in the study area, some of which include the Coachella Valley Stormwater Channel, the La Quinta Evacuation Channel, the Upper Bear Creek drainage system,

and the East La Quinta Channel. The City also maintains storm drains in the Cove neighborhood, and anticipates installing curbs, gutters and possibly storm drains in the Downtown Village area within a few years.

Future development in the City, Annexation No. 12 and the balance of the planning area may contribute to an incremental increase in runoff and flooding potential, and may be subject to storm hazards as well as seismically induced inundation from Lake Cahuilla and above-ground storage tanks. The General Plan Program EIR will assess existing flood hazards, the implications of continued urbanization, and anticipated flooding hazards associated with buildout of the General Plan and Annexation No. 12.

Geology/Seismicity

The City and Coachella Valley are affected by the active geologic conditions associated with the San Andreas Fault Zone and other nearby faults. Major earthquakes have occurred in and around the Coachella Valley in the past decade, and the region is considered a prime candidate for major seismic activity in the next 20 to 30 years.

Although no active or potentially active faults are known to occur within the planning area, the San Andreas, San Jacinto, and Elsinore Fault Zones are located in the project vicinity and are capable of impacting development within the planning area. Issues associated with these geotechnical conditions include ground rupture, strong ground shaking, liquefaction, subsidence and slope instability. In particular, potential instability of the rocky hillsides of the Santa Rosa and Coral Reef Mountains, and liquefaction in the eastern portion of the planning area pose a potential threat to development in the planning area. The northern portion of the planning area is subject to strong, sustained winds and is susceptible to the effects of wind erosion and blowsand. Lands disturbed by agriculture, grading and flooding may also be adversely impacted by significant erosive forces. These and associated issues will be addressed in detail in the EIR.

Air Quality

Compared to other communities in southern California, the City of La Quinta has generally good air quality. However, in the past few decades, a noticeable deterioration in air quality has occurred due to increased development, population growth, traffic, construction activity and various other site disturbances.

The City of La Quinta and the Coachella Valley are located within the Salton Sea Air Basin (SSAB). The South Coast Air Quality Management District (SCAQMD) is responsible for establishing air quality management criteria and management policies for the SSAB and neighboring air basins. The SCAQMD also routinely monitors daily pollutant levels and meteorological factors throughout the District. Local monitoring is conducted in Indio and at the Palm Springs International Airport.

Of all air pollutants, ozone and PM₁₀ (suspended particulate matter) are the most prevalent in the Coachella Valley. The Valley is currently classified as a "severe-17" non-attainment area for ozone under the federal Clean Air Act. Although these pollutants are produced from various sources within the Coachella Valley, the most evident degradation of air quality from ozone may be attributed to sources outside the area, including the Los Angeles County and San Bernardino/Riverside air basins. The region is also classified as a "serious" non-attainment area for PM₁₀ by the U.S. EPA. However, recent monitoring data indicate that PM₁₀ emissions in the region have been reduced considerably, and the Coachella Valley may soon be eligible for reconsideration by the EPA as having attained the federal PM₁₀ standard.

Buildout associated with implementation of the General Plan and Annexation No. 12 may result in occasional and temporary exceedances of both state and federal standards for various air pollutants. These issues will be more fully assessed in the Program EIR.

Water Resources

Domestic water resources for the City of La Quinta and unincorporated lands southeast of the City limits are provided by the Coachella Valley Water District (CVWD). The Myoma Dunes Mutual Water Company provides domestic water to the Bermuda Dunes area in the northernmost portion of the planning area. Both water purveyors utilize wells to extract groundwater from the Whitewater River Subbasin. The Whitewater River Subbasin is recharged both naturally, through percolation of rainfall and mountain runoff, and artificially through the importation of Colorado River water transported via the Colorado River Aqueduct. The subbasin is extensive, but has been in an overdraft condition for several years. While the annual overdraft ($\pm 0.24\%$) is rather limited, continued growth in the City and other parts of the subbasin service area will have a cumulative effect on the long-term viability of this water source. The Program EIR will quantify General Plan and Annexation No. 12 buildout demand for these resources and provide mitigation measures designed to address projected impacts.

Biological Resources

The City of La Quinta and the Coachella Valley are located within one of the most biologically unique and diverse regions in the country. The Valley supports a wide variety of common and sensitive plants and animals that are well adapted to the desert floor, alluvial fan and rocky hillside environments that comprise the region. Common species which are known to occur in these habitats include the desert iguana, Golden eagle, coyote, black-tailed jackrabbit, Prairie falcons and several species of bats. The area also supports a number of sensitive species, which are listed by state and/or federal governments as endangered, threatened, or species of concern. Sensitive animal species occurring in the region include the Coachella Valley fringe-toed lizard, desert tortoise, LeConte's thrasher, endangered Peninsular bighorn sheep and Crissal thrasher. Sensitive plant species include the California ditaxis, Coachella Valley milk-vetch, flat-seeded spurge, and glandular ditaxis.

One of the most unique biological species in the region is the Coachella Valley fringe-toed lizard (CVFTL), which is dependent upon the natural blowsand processes of the Coachella Valley. The CVFTL was listed as a federally threatened and state endangered species in 1980. The Coachella Valley Fringe-toed Lizard Habitat Conservation Plan was developed in 1985 as a cooperative federal and local program of conservation for the species. Portions of the General Plan planning area lie within the boundaries of occupiable CVFTL habitat, and development within these areas is subject to the provisions of the CVFTL Habitat Conservation Plan.

The City of La Quinta and other communities in the Coachella Valley are currently participating in the preparation of the Coachella Valley Multi-Species Habitat Conservation Plan (MSHCP). This Plan is designed to conserve adequate, unfragmented habitat for a wide range of plan communities and special-status animal species. Once adopted, the Plan will standardize mitigation and compensation measures for species of concern on a regional basis, and may limit the need for project-by-project biological review. The Program EIR will evaluate potential impacts of General Plan and Annexation No. 12 buildout on biological species occurring in the planning area.

Noise

The predominant noise source in the planning area is vehicular traffic. In general, the existing noise environment in the City is relatively quiet, with significant noise associated with Interstate-10, State Highway 111, Washington Street and other major arterials. Noise levels in Annexation No. 12 are relatively low at present, but will be impacted by development and redevelopment in the future.

Other substantial noise generators include the Southern Pacific Railroad, construction vehicles and equipment, and mechanical equipment including fans and compressors. Occasionally intrusive noise levels are generated by small aircraft approaching or departing from the Thermal and Bermuda Dunes Airports. Noise levels generated by current traffic will be evaluated, and future traffic will be modeled to determine associated impacts and establish parameters for mitigation.

Cultural Resources

The most identifiable native culture to evolve in the Coachella Valley region is the Desert Cahuilla, whose territory extended from the Salton Sea (ancient Lake Cahuilla) to the San Geronio Pass. Most Cahuilla sites are associated with canyons, especially those associated with permanent or seasonal surface water, including site located along tectonic faults that interrupt the movement of ground water and direct it to the surface. Because of its unique geographical location straddling the ancient shoreline of Lake Cahuilla, the City of La Quinta is located within one of the most dense concentrations of archaeological sites in California. A substantial number of cultural sites developed by the Cahuilla have been identified and recorded in the planning area, including villages, trail and road segments, and several wells.

Historic resources are generally defined as those structures or features more than 45 years old that contain evidence of human activity. Nearly 120 important historic resources have been identified and recorded inside or in the immediate vicinity of the planning area, including historic buildings or building groups, a cemetery, and canal. The majority of these are of late 1930s and 1940s vintage, but the oldest feature dates back to 1876. The potential impacts of continued urbanization on archaeological and historic resources will be addressed in the Program EIR.

Scenic Resources

One of the Coachella Valley's most important assets is its exceptional mountain and open space views. The Valley is bordered on the north, west and south by the Little San Bernardino, San Bernardino, San Jacinto and Santa Rosa Mountains. The contrasting mountain scenery and vast expanses of desert on the valley floor contribute to the valley's scenic beauty and help define its character. Views of the San Jacinto and Santa Rosa Mountains, in particular, are highly valued, and continued development in the General Plan planning area and Annexation No. 12 could constitute a significant impact to these and other valuable scenic resources. The Program EIR will assess the potential for adverse impacts to these resources.

Socio-Economic Resources

Since 1990, the City of La Quinta has been the fastest growing city in the Coachella Valley, with population increases averaging about 10% per year. From 1990 to 1997, the number of households in the City increased by 61.7 percent.¹ The City's population was estimated at 21,763 permanent residents in 1999.² The average La Quinta resident is younger than the state average, with a median age of 32 years versus 36 years. The average City resident also enjoys a higher per capita income than the County or State resident. In 1998, the per capita income was \$19,700 for the City of La Quinta, \$17,400 for Riverside County, and \$18,400 for the state of California.³ Household incomes

are also relatively high, averaging about \$70,000, with an average household size of 2.82 persons.⁴

La Quinta is a relatively new market in the Coachella Valley, but one which has grown rapidly. Historically, the City has been identified with the La Quinta Hotel, and the PGA West and Rancho La Quinta golf communities, and these facilities continue to provide the city with national recognition as a resort-oriented community. Resort and commercial development generates the majority of the municipal revenues received by the City, in the form of transient occupancy and sales taxes. Combined, these revenues comprise approximately 66% of City revenues.⁵ La Quinta is also emerging as a sub-regional retailing center for the eastern central portion of the Valley and has attracted several large retailers, including Wal-Mart, Home Depot and Lowe's Hardware.

Most residential growth activity continues to be single family home development. Employment opportunities are generally service-oriented, and are centered around country clubs, construction, retail and landscape management industries. Major employers include the Westfield Shoppingtown Palm Desert, Coachella Valley Unified School District, Desert Sands Unified School District, County of Riverside, La Quinta Hotel and John F. Kennedy Hospital.

Public Services and Facilities

Fire protection services are provided to the City and the surrounding planning area by the Riverside County Fire Department through a contract with the Department of Forestry. The entire planning area is served by six fire stations with overlapping coverage areas. Four of these stations are located within the planning area, and two others are well situated to provide additional fire support and excellent response times to the community.

Police protection in the City is provided by the Riverside County Sheriff's Department, which operates out of a sheriff's station in Indio. Although police response times can vary depending upon the location of patrols and level of activity, current response times are within acceptable levels.

Public education is provided to the General Plan planning area by two school districts. The Desert Sands Unified School District (DSUSD) serves students living west of Jefferson Street and north of Avenue 48. Students living elsewhere in the planning area attend schools operated by the Coachella Valley Unified School District. The La Quinta Public Library, which is a branch of the Riverside County Library System, was recently expanded and includes approximately 28,000 volumes.

The City is fortunate to be located in close proximity to a number of regional recreational facilities, including Lake Cahuilla County Park and a system of public hiking and equestrian trails which are maintained by the Bureau of Land Management and traverse the Santa Rosa Mountains. In addition, the City owns, operates and maintains three neighborhood parks, one community park and one recreational senior center.

The Coachella Valley Water District (CVWD) is responsible for providing domestic water services to the majority of the planning area, including incorporated City lands and the Thermal area. However, only limited areas south of Avenue 58 are currently connected to the water delivery system. Domestic water is provided to the Bermuda Dunes community by the Myoma Dunes Mutual Water Company. Sewage collection and treatment services are provided by the CVWD,

¹ "La Quinta Market Analysis and Competitive Position Within the Coachella Valley," prepared by Sedway Group, January 25, 1999.

² California Department of Finance, January 1, 1999.

³ "1998-99 Economic Development Plan," prepared by Rosenow Spevacek Group, Inc., April 1998.

⁴ "La Quinta Market Analysis and Competitive Position Within the Coachella Valley," prepared by Sedway Group, January 25, 1999.

⁵ Ibid.

which operates two wastewater treatment plants serving the planning area. However, portions of the planning area, including much of Bermuda Dunes and lands south of Avenue 58, continue to rely on individual septic systems.

The City of La Quinta and Riverside County contract with Waste Management of the Desert for the collection and disposal of solid waste. The majority of solid waste collected in the planning area is disposed of at the Edom Hill Landfill in the Indio Hills. The projected closure date for the Edom Hill Landfill is year 2004. Solid waste from the Thermal community is transported to the Mecca Landfill, which is expected to close in year 2011. Given the impending closure of these landfills, the City and Waste Management of the Desert will need to evaluate and utilize alternative solid disposal sites in the near future.

Electrical service is provided to the planning area by the Imperial Irrigation District (IID), which operates six substations within or in the immediate vicinity of the planning area. Natural gas service is provided by The Gas Company through a series of pipelines of differing sizes and pressure capacities. Natural gas service is provided to the majority of the planning area, but is limited south of Airport Boulevard and in the La Quinta Cove. GTE California provides basic and state-of-the-art telephone services to the planning area. Cable television services are provided by Time Warner through both overhead and underground lines. The impacts to these and other public and quasi-public services will be further evaluated in the project EIR.

The impact of the provision of municipal services for Annexation No. 12 will also be assessed, as all these services will become the responsibility of the City immediately following annexation.

Environmental Checklist Form

1. Project Title: La Quinta Comprehensive General Plan Update and Annexation No. 12
2. Lead Agency Name and Address: City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253
3. Contact Person and Phone Number: Fred Baker
760-777-7125
4. Project Location: City of La Quinta, Riverside County, California
5. Project Sponsor's Name and Address: City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253
6. General Plan Designation: varies/all
7. Zoning: varies/all
8. Description of Project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)

New Comprehensive General Plan addressing 20,253.5 acres within the corporate limits, and 30,168.1 acres in the unincorporated planning area. Includes changes to land use designations, circulation system, and new goals, policies and programs for all General Plan Elements. Focussed analysis of an immediate potential annexation area totalling 5,419.9 acres, bounded by Airport Boulevard on the north, Jackson Boulevard on the east, Avenue 62 on the south and the existing City limits on the west, will also be incorporated into the EIR. The annexation area is proposed to be primarily designated low density residential, with Agricultural Overlay. The Sphere of Influence amendment includes 8,205.04 acres bounded on the north by Avenue 50, on the west by Jackson Street, on the south by Avenues 62 and 66, and on the east by Polk, Harrison and Van Buren Streets.
9. Surrounding Lane Uses and Setting: Briefly describe the project's surroundings.

Surrounding lands are under the jurisdiction of Riverside County, and the cities of Indio, Coachella, Indian Wells and Palm Desert. Surrounding lands are designated for a wide variety of permitted uses, some of which include residential, commercial, business park, agriculture and open space.
10. Other agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

Safety/Geotechnical Element to be reviewed by the California Division of Mines and Geology.

Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☒ Aesthetics	☐ Hazards and Hazardous Materials	☐ Public Services
☒ Agriculture Resources	☒ Hydrology and Water Quality	☐ Recreation
☒ Air Quality	☐ Land Use Planning	☒ Transportation/Traffic
☒ Biological Resources	☐ Mineral Resources	☐ Utilities and Service Systems
☐ Cultural Resources	☒ Noise	☒ Mandatory Findings
☐ Geology and Soils	☒ Population and Housing	

Determination

(To be completed by the Lead Agency.)

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared

☐

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the applicant. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☒

I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

☐

Signature Nicole Savia Crisite Date 4/17/01
Printed Name NICOLE SAVIA CRISTE For CITY OF LA QUINTA

Evaluation of Environmental Impacts:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the reference information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Potentially Significant Unless Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVIII, "Earlier Analysis," may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). Earlier analyses are discussed in Section XVIII at the end of the checklist.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) The analysis of each issue should identify:
 - a) the significance criteria or threshold used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance

Issues (and Supporting Information Sources):

Would the proposal result in potential impacts involving:

Potentially
Significant
Impact

Potentially
Significant
Unless
Mitigated

Less Than
Significant
Impact

No
Impact

I. AESTHETICS. Would the project:

- a) Have a substantial adverse effect on a scenic vista? (Draft General Plan, Circulation Element)
- b) Damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (Draft General Plan, Circulation Element)

	X		
	X		

- c) Substantially degrade the existing visual character or quality of the site and its surroundings? (Draft General Plan, Circulation Element)
- d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (Draft General Plan, Env. Resources Element)

X			
X			

II. AGRICULTURAL RESOURCES: . In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model prepared by the California Dept. Of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

- a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to on-agr (Draft General Plan, Land Use Element)
- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? (Draft General Plan, Land Use Element)
- c) Involve other changes in the existing environment which, due to their location or nature, could individually or cumulatively result in loss of Farmland, to non-agricultural use? (Draft General Plan, Land Use Element)

X			
X			
	X		

III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

- a) Conflict with or obstruct implementation of the applicable Air Quality Attainment Plan or Congestion Management Plan? (Draft General Plan, Env. Resources Element)
- b) Violate any stationary source air quality standard or contribute to an existing or projected air quality violation? (Draft General Plan, Env. Resources Element)
- c) Result in a net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? (SCAQMD CEQA Handbook)
- d) Expose sensitive receptors to substantial pollutant concentrations? (Draft General Plan, Env. Resources Element)

	X		
	X		
X			
	X		

- e) Create objectionable odors affecting a substantial number of people? (Draft General Plan, Env. Resources Element)

		X	
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IV. BIOLOGICAL RESOURCES: Would the project:

- a) Have a substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (General Plan Draft MEA, Env. Resources)
- b) Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? (General Plan Draft MEA, Env. Resources)
- c) Adversely impact federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) Either individually or in combination with the known or probable impacts of other activities through direct removal, filling, hydrological interruption, or other means? (General Plan Draft MEA, Env. Resources)
- d) Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites? (General Plan Draft MEA, Env. Resources)
- e) Conflict with any local policies or ordinances protecting biological resources such as a tree preservation policy or ordinance? (General Plan Draft MEA, Env. Resources)
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan? (General Plan Draft MEA, Env. Resources)

X			
	X		
			X
X			
			X
		X	

V. CULTURAL RESOURCES: Would the project:

- a) Cause a substantial adverse change in the significance of a historical resource which is either listed or eligible for listing on the National Register of Historic Places, the California Register of Historic Resources, or a local register of historic resources? (General Plan Draft MEA, Env. Resources)
- b) Cause a substantial adverse change in the significance of a unique archaeological resources (i.e., an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it contains information needed to answer important scientific research questions, has a special and particular quality such as being the oldest or best available example of its type, or is directly associated with a scientifically recognized important prehistoric or historic event or person)? (General Plan Draft MEA, Env. Resources)
- c) Disturb or destroy a unique paleontological resource or site? (General Plan Draft MEA, Env. Resources)
- d) Disturb any human remains, including those interred outside of formal cemeteries? (General Plan Draft MEA, Env. Resources)

	X		
	X		
	X		
		X	

VI. GEOLOGY AND SOILS: Would the project:

- a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (General Plan Draft MEA, Env. Hazards)

			X
	X		
	X		
	X		

ii) Strong seismic ground shaking?(General Plan Draft MEA, Env. Hazards)

iii) Seismic-related ground failure, including liquefaction? (General Plan Draft MEA, Env. Hazards)

iv) Landslides? (General Plan Draft MEA, Env. Hazards)

b) Result in substantial soil erosion or the loss of topsoil? (General Plan Draft MEA, Env. Hazards)

c) Be located on a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction or collapse? (General Plan Draft MEA, Env. Hazards)

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? (General Plan Draft MEA, Env. Hazards)

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal system where sewers are not available for the disposal of waste water? (General Plan Draft MEA, Env. Hazards)

	X		
	X		
	X		
		X	

VII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (General Plan Draft MEA, Env. Hazards)

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment? (General Plan Draft MEA, Env. Hazards)

c) Reasonably be anticipated to emit hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (General Plan Draft MEA, Env. Hazards)

d) Is the project located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? (Riverside County Hazardous Materials Listing)

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? (General Plan land use map)

f) For a project within the vicinity of a private airstrip; would the project result in a safety hazard for people residing or working in the project area? (General Plan land use map)

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (General Plan Draft MEA, Env. Hazards)

		X	
		X	
		X	
	X		
		X	
			X
		X	

h) Expose people or structures to the risk of loss, injury or death involving wildlands fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? (General Plan land use map)

		X	
--	--	---	--

VIII. HYDROLOGY AND WATER QUALITY : Would the project:

a) Violate Regional Water Quality Control Board water quality standards or waste discharge requirements? (General Plan Draft MEA, Env. Resources)

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted? (General Plan Draft MEA, Env. Resources)

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? (General Plan Draft MEA, Env. Resources)

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? (General Plan Draft MEA, Env. Resources)

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems to control? (General Plan Draft MEA, Env. Resources)

f) Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? (General Plan Draft MEA, Env. Resources)

g) Place within a 100-year floodplain structures which would impede or redirect flood flows? (General Plan Draft MEA, Env. Resources)

		X	
	X		
	X		
	X		
		X	
X			
X			

IX. LAND USE AND PLANNING: Would the project:

a) Physically divide an established community? (General Plan Draft MEA, Land Use)

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local costal program, or zoning ordinance) adopted for the purposes of avoiding or mitigating an environmental effect? (General Plan Draft MEA, Land Use)

c) Conflict with any applicable habitat conservation plan or natural communities conservation plan? (General Plan Draft MEA, Env. Resources)

			X
		X	
	X		

X. MINERAL RESOURCES: Would the project:

a) Result in the loss of availability of a known mineral resource classified MRZ-2 by the State Geologist that would be of value to the region and the residents of the state? (General Plan Draft MEA, Env. Resources)

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? (General Plan Draft MEA, Env. Resources)

		X	
		X	

XI. NOISE: Would the project result in:

- a) Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (General Plan Draft MEA, Env. Hazards)
- b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? (General Plan Draft MEA, Env. Hazards)
- c) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? (General Plan Draft MEA, Env. Hazards)
- d) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?(General Plan Draft MEA, Env. Hazards)
- e) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive levels? (General Plan land use map)

X			
		X	
	X		
	X		
	X		

XII. POPULATION AND HOUSING: Would the project:

- a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure) ? (General Plan Draft MEA, Land Use)
- b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? (General Plan Draft MEA, Land Use)
- c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? (General Plan Draft MEA, Land Use)

X			
			X
			X

XIII. PUBLIC SERVICES

- a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
 - Fire protection? (General Plan Draft MEA, Infra. & Public Serv.)
 - Police protection? (General Plan Draft MEA, Infra. & Public Serv.)
 - Schools? (General Plan Draft MEA, Infra. & Public Serv.)
 - Parks? (General Plan Draft MEA, Infra. & Public Serv.)
 - Other public facilities? (General Plan Draft MEA, Infra. & Public Serv.)

	X		
	X		
	X		
	X		
	X		

XIV. RECREATION:

- a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? (General Plan Draft MEA, Parks & Recreation)
- b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? (General Plan Draft MEA, Parks & Recreation)

	X		
	X		

XV. TRANSPORTATION/TRAFFIC: Would the project:

- a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? (General Plan Draft MEA, Circulation)
- b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? (General Plan Draft MEA, Circulation)
- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? (General Plan Draft MEA, Circulation)
- d) Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (General Plan Draft MEA, Circulation)
- e) Result in inadequate emergency access? (General Plan Draft MEA, Circulation)
- f) Result in inadequate parking capacity? (General Plan Draft MEA, Circulation)
- g) Conflict with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)? (General Plan Draft MEA, Circulation)

X			
	X		
			X
			X
		X	
	X		
		X	

XVI. UTILITIES AND SERVICE SYSTEMS: Would the project:

- a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? (General Plan Draft MEA, Infra. & Public Serv.)
- b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (General Plan Draft MEA, Infra. & Public Serv.)
- c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (General Plan Draft MEA, Infra. & Public Serv.)
- d) Are sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? (General Plan Draft MEA, Infra. & Public Serv.)
- e) Has the wastewater treatment provider which serves or may serve the project determined that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? (General Plan Draft MEA, Infra. & Public Serv.)
- f) Is the project served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? (General Plan Draft MEA, Infra. & Public Serv.)

		X	
		X	
	X		
	X		
		X	
	X		

XVII. MANDATORY FINDINGS OF SIGNIFICANCE:

- a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? ()
- b) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? ()

	X		
	X		

c) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current project, and the effects of probable future projects)? ()

d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? ()

X			
	X		

XVIII EARLIER ANALYSES.

Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, one or more effects have been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case a discussion should identify the following on attached sheets.

a) **Earlier analyses used.** Identify earlier analyses and state where they are available for review.

No earlier analyses specific to this project have been used.

b) **Impacts adequately addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

Not applicable.

c) **Mitigation measures.** For effects that are "Less than Significant with Mitigation Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

Not applicable. To be addressed in EIR.

CITY OF LA QUINTA COMPREHENSIVE GENERAL PLAN UPDATE, ANNEXATION NO. 12 AND SPHERE OF INFLUENCE AMENDMENT

ADDENDUM TO ENVIRONMENTAL CHECKLIST

- I.a. Future development facilitated by the proposed General Plan and in Annexation No. 12 has the potential to adversely impact scenic vistas of the Santa Rosa and Coral Reef Mountains as viewed from public and private lands and/or rights-of-way. Policies and programs in the proposed Plan, including comprehensive landscape programs, requirements for site-sensitive planning, implementation of the City Zoning Ordinance, and review of development plans, will limit these impacts. However, a more thorough assessment should be made.
- I.b. Grading and construction activities associated with implementation of the proposed General Plan could cause damage to scenic resources, including vegetation and rock outcroppings. A series of mitigation measures, including the architectural review process and implementation of the hillside protection ordinance, are expected to minimize these impacts. However, these issues should be further assessed.
- I.c. Continued urbanization made possible by the updated General Plan and Annexation No. 12 has the potential to degrade the existing visual character of the City and its surroundings. In particular, land clearing, grading and construction activity have the potential to alter existing scenic resources. These impacts are expected to be minimized through adherence to the City Zoning Ordinance and other policies and programs set forth in the Plan. Future development is expected to be compatible with current land uses. These issues should be further examined in the EIR.
- I.d. The City of La Quinta enjoys dark night skies with excellent visibility. Future development associated with the General Plan update has the potential to create substantial light and glare, from parking lot lighting, security lighting and other sources. Additional analysis in the EIR, and the development of appropriate mitigation measures, will be required to reduce these impacts to acceptable levels.
- II.a,b,c. As described in the Riverside County General Plan, some lands in the eastern portion of the General Plan planning area are designated as Prime Farmland and Farmland of Statewide Importance. The long-term impacts of future development on these lands and on Williamson Act contracts need to be identified and evaluated in the EIR. (Source: Figure VI.34, Riverside County General Plan, revised June 3, 1993)
- III.a. Future development facilitated by the proposed Plan and Annexation No. 12 has the potential to emit pollutants, including particulate matter (PM10), which are subject to local and regional air quality plans. Future projects are expected to be fully compliant with applicable air quality plans; however these issues should be further evaluated. (Source: "1997 Air Quality Management Plan," South Coast Air Quality Management District)

- III.b. Development associated with buildout of the proposed General Plan could exceed air quality thresholds established by the South Coast Air Quality Management District. These impacts are expected to be mitigated through the use of energy-efficient heaters and related appliances, site watering and other measures intended to reduce the emission of fugitive dust, and the preparation of site-specific air quality analyses. Development projects in Annexation No. 12 have the potential to create similar impacts on a smaller scale. These issues should be further examined. (Source: "CEQA Handbook," South Coast Air Quality Management District, April 1993)
- III.c. The Coachella Valley is a non-attainment area for PM10 and ozone. The grading and construction of Plan-facilitated development could result in a cumulative net increase in these pollutants. In addition, automobile traffic and stationary sources, such as air conditioners and natural gas heaters, are expected to generate air pollutants both at General Plan buildout and through development and redevelopment in Annexation No. 12. Additional analysis is required to determine the level of impacts and recommend appropriate mitigation measures.
- III.d. Development facilitated by the proposed General Plan could potentially expose sensitive receptors, including schools and residences, to pollutant concentrations. Most development in Annexation No. 12 will continue to be of sensitive receptors. A number of General Plan policies and programs are directed at reducing these potential impacts to insignificant levels, including thoughtful land use planning and zoning, the phasing of development projects, and the implementation of fugitive dust suppression measures. However, these issues should be discussed further in the EIR.
- III.e. Implementation of the Plan has a limited to potential to create objectionable odors which would affect a substantial number of people. Odors associated with industrial or heavy commercial land uses in particular have a potential to create objectionable odors. These potential impacts should be further evaluated.
- IV.a. Lands generally north of Avenue 50 occur in an area of wind blown sand dunes, which may support a variety of special status species, including the Coachella Valley fringe-toed lizard and Coachella Valley milkvetch. In addition, the rocky hillsides of the Santa Rosa Mountains offer habitat to the federally endangered Peninsular bighorn sheep and other sensitive species. Further analysis is required to determine which species do occur or are likely to occur in the planning area and Annexation No. 12, and what mitigation measures may be needed to adequately reduce impacts to these species. (Source: "City of La Quinta, Biological Assessment," Tierra Madre Consultants, Inc. December 1999)
- IV.b. The planning area is not known to contain any significant riparian habitat or other sensitive natural communities, although it does include limited desert dry wash habitat, which may support a number of birds and other species. Impacts to these resources are expected to be limited, but they should be further evaluated in the EIR. (Source: "City of La Quinta, Biological Assessment," Tierra Madre Consultants, Inc. December 1999)

- IV.c. Federally protected wetlands are not known to occur within the boundaries of either the General Plan planning area or Annexation No. 12, and therefore will not be adversely impacted by adoption and implementation of the Plan. (Source: "City of La Quinta, Biological Assessment," Tierra Madre Consultants, Inc. December 1999)
- IV.d. Development facilitated by the proposed Plan and annexation area may result in the establishment of insurmountable barriers which isolate native species, interfere with their migration corridors, and/or impede the use of their nursery sites. These issues should be further examined. (Source: "City of La Quinta, Biological Assessment," Tierra Madre Consultants, Inc. December 1999)
- IV.e. Future development associated with buildout of the General Plan and annexation area will be carefully reviewed to assure its compliance with local policies and ordinances which protect biological resources, including the federally endangered Peninsular bighorn sheep.
- IV.f. Portions of the planning area are located within the boundaries of the mitigation fee area for, and are subject to the provisions of the Coachella Valley Fringe-toed Lizard Habitat Conservation Plan (HCP). General Plan policies and programs provide assurance that future development in the planning area will be compliant with the provisions of the HCP and any future habitat conservation plans. (Source: "City of La Quinta, Biological Assessment," Tierra Madre Consultants, Inc. December 1999)
- V.a,b. A number of important archaeological and/or historical sites are known to occur within the planning area, particularly in the vicinity of ancient Lake Cahuilla. Future development facilitated by implementation of the General Plan and Annexation No. 12 could lead to the alteration or destruction of cultural resources. A series of General Plan policies and programs, including the thorough review of development plans for potential impacts to cultural resources, and continued efforts at preservation, are expected to reduce potential impacts to acceptable levels. However, these issues should be further assessed in the EIR. (Source: "Cultural Preservation Element, City of La Quinta General Plan," CRM Tech, October 4, 1999, revised October 21, 1999)
- V.c. Portions of the General Plan planning area and Annexation No. 12 occur within the historic shoreline of ancient Lake Cahuilla, and soils in the vicinity may have a high degree of sensitivity for paleontological resources. Future development has the potential to directly or indirectly destroy these resources if not adequately mitigated. The proposed General Plan includes requirements for paleontological resource analyses for developments occurring in areas of high sensitivity, and project-specific mitigation plans, which are expected to reduce potential impacts to levels of insignificance. However, these issues should be further evaluated in the EIR. (Source: "Paleontological Resources Mitigation Plan," Section of Geologic Sciences, San Bernardino County Museum, October 1999)

- V.d. Given that the occurrence of native settlements and other cultural resource sites within the planning area, Plan-facilitated development has the potential to disturb human remains, including those interred outside of formal cemeteries. The proposed Plan supports a proactive approach to the preservation of cultural resources, and includes programs intended to reduce potential impacts to these resources. Some of these include the surveying of project sites to identify potential resources, and on-site monitoring in areas of high sensitivity. Site-specific studies, also required by policy in the Plan, will be required for development proposals determined to have a high level of sensitivity in the annexation area. However, these issues should be addressed further. (Source: "Cultural Preservation Element, City of La Quinta General Plan," CRM Tech, October 4, 1999, revised October 21, 1999)
- VI.a.i. No active or potentially active faults are known to occur within the General Plan planning area. Therefore, the risks associated with fault rupture are not considered to be significant. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)
- VI.a.ii. The planning area is located in close proximity to two of southern California's most active fault zones, the San Andreas and San Jacinto, and implementation of the proposed General Plan could expose additional people and structures to potentially strong seismic groundshaking. Further development is Annexation No. 12 has the same potential. General Plan policies and programs, including strict adherence to the Uniform Building Code and other applicable building standards, and the rehabilitation of unreinforced structures, are directed at minimizing these impacts. However, these issues need to be further assessed. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)
- VI.a.iii. Much of the eastern portion of the planning area and all of the annexation area may be susceptible to seismically induced ground failure, including liquefaction, and development facilitated by the proposed Plan could expose additional people and structures to such hazards. While these impacts are expected to be minimized through the application of mitigation measures, these issues should be evaluated further in the EIR. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)
- VI.a.iv. Future development at the base of the Santa Rosa and Coral Reef Mountains, where bedrock is intensely fractured or jointed, may be vulnerable to seismically induced rockfall. The proposed General Plan addresses these hazards through the requirement for site-specific geotechnical analyses in areas subject to slope instability, and continued implementation of the City Hillside Conservation Zone ordinance, which limits development on slopes. However, these issues should be addressed further in the EIR. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)

- VI.b. Development facilitated by the proposed Plan or by the annexation may have the potential of inducing erosion through mass grading, removing topsoil and otherwise altering surface relief and soil consolidation. These impacts are expected to be mitigated through the implementation of site-specific grading and drainage controls, and improvements that enhance local drainage conditions. These issues should be further addressed.
- VI.c. Plan-facilitated development may be constructed on unstable geologic units or soils, including manufactured slopes, alluvial fan deposits transported from the Santa Rosa Mountains, and wind-blown sands in the northern portion of the planning area. Development on these soils could potentially result in landslides, lateral spreading, liquefaction or collapse if not adequately mitigated. These impacts are expected to be minimized by locating drainage facilities and heavily irrigated areas away from foundations and other structural supports. However, these impacts should be examined further in the EIR. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)
- VI.d. Expansive soils are known to occur in the vicinity of ancient Lake Cahuilla. Development facilitated by the proposed General Plan which occurs on these lands may increase the risks to life and/or property. These potential hazards can be minimized through the overexcavation of soils, the use of reinforced steel in foundations, and avoidance of excessive watering. These issues should be addressed further in the EIR. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)
- VI.e. Groundwater contamination associated with discharge from septic tanks has been documented elsewhere in the Coachella Valley, and the General Plan study area may contain soils which are incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems. To minimize these potential risks, the General Plan encourages the connection of all new development to the existing sewage collection system. However, the potential impacts of annexation and Plan-facilitated development on groundwater resources should be further evaluated.
- VII.a.b. Continued urbanization facilitated by the proposed General Plan may result in new development which involves the production, storage, use and/or transport of hazardous or toxic materials. The General Plan establishes a variety of policies and programs intended to reduce the risk of a hazardous materials release, including the review of development proposals for hazardous materials sites, land use planning which assures compatibility of hazardous material operations with surrounding lands, and strict adherence to the Uniform Fire Code and other applicable hazardous materials regulations. These issues should be assessed in the EIR.
- VII.c. Development facilitated by the Plan has a limited potential to handle or emit hazardous materials in the immediate vicinity of an existing or planned school. The

General Plan seeks to minimize these potential impacts through review of development applications, and thoughtful land use planning, which permits hazardous materials operations only where compatible with surrounding land uses. These issues should be further assessed in the EIR.

- VII.d. The potential for Plan-facilitated development to be located on a site which is included on a list of identified hazardous materials sites is limited. However, these issues should be further assessed. (Source: "Identified Hazardous Waste and Substance Sites," prepared by California Environmental Protection Agency, July 1992)
- VII.e. The Thermal Airport is located in the southeastern portion of the planning area, and the Bermuda Dunes Airport is located in the northeastern portion. Implementation of the General Plan will permit industrial development in the immediate vicinity of the Thermal Airport. To minimize safety hazards for people residing or working in the area, the General Plan provides for special review of proposed industrial development in the vicinity of the airport. However, these issues should be further assessed in the EIR.
- VII.f. The planning area is not located in the immediate vicinity of a private airstrip, and therefore is not expected to have any adverse impacts in airport operations or the safety of people in the area.
- VII.g. The proposed General Plan requires that the City continue to maintain and update its Multi-Hazard Functional Plan. Future development facilitated by the Plan is not expected to interfere with this or any other adopted emergency response plan.
- VII.h. Portions of the planning area are subject to strong, sustained winds, which can increase the risks associated with urban wildfires. Development facilitated by the proposed General Plan may expose additional people and/or structures to loss, injury or death involving fires, and these impacts should be further evaluated.
- VIII.a. Urbanization which may be facilitated by the proposed General Plan is not expected to contribute substantially to violations of water quality standards or waste discharge requirements. The Plan requires that all development plans be reviewed for their potential to create surface and ground water contamination hazards. However, these potential impacts should be analyzed further in the EIR.
- VIII.b. Implementation of the Plan and development in the annexation area will facilitate additional urban development and may result in a reduction in groundwater available for use. Drawdown on the aquifer serving the City may be offset somewhat by natural recharge, the implementation of water conserving landscaping, the use of low-flush toilets and low-flow shower heads, and other water conservation efforts. However, these potential impacts should be examined and quantified, where possible, in the EIR.

- VIII.c.d. Adoption and implementation of the Plan will facilitate development which may alter existing drainage patterns and increase the rate of erosion and/or siltation in portions of the planning area. Intensification in land uses in the annexation area could also represent an impact. The General Plan sets forth a variety of policies and programs which are intended to limit these impacts, including the construction of on-site stormwater management improvements, and the implementation and updating of the Multi-Functional Hazard Plan, as it pertains to flooding and hydrology issues. However, these issues should be further evaluated. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)
- VIII.e. Plan-facilitated development will generate increased runoff. The proposed General Plan requires that new development retain project-generated runoff and flows from the 100-year flood on-site. Runoff is not expected to exceed the capacity of existing or planned stormwater drainage systems. Nonetheless, these potential impacts should be addressed in more detail in the EIR.
- VIII.f. Continued urbanization which may be facilitated by the proposed Plan and by the annexation effort has the potential to contribute to the further degradation of surface and/or groundwater due to increased runoff and other possible contaminants. The development of on-site drainage improvements which implement the National Pollutant Discharge Elimination System (NPDES), and the continued connection of new and existing development to a city-wide sewage treatment system, are expected to mitigate these potential impacts. However, they should be further analyzed.
- VIII.g. Existing residential units in the vicinity of Eisenhower Drive and Washington Street, south of the La Quinta Evacuation Channel, occur within the 100-year flood plain. Implementation of the proposed Plan will facilitate the development of additional residential units in this area and may increase the exposure of people and/or structures to flooding hazards. General Plan policies and programs are directed at reducing flood-related hazards. However, these issues should be addressed further. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)
- VIII.h. The proposed Plan will facilitate the development of structures within the 100-year flood hazard area which have the potential to redirect and/or impede flows. These issues should be further examined. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)
- VIII.i. While the proposed General Plan prohibits the construction of new critical facilities within the boundaries of the 100-year floodplain, the Plan does facilitate the development of other structures in these areas, and may expose additional people and structures to flood related hazards. General Plan policies appear to adequately mitigate these potential impacts. However, these issues should be examined further. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)

- VIII.j. Portions of the planning and annexation areas are located in the vicinity of the Lake Cahuilla levee system and downstream of above-ground water storage tanks. Development in these areas may be subject to the risks associated with seismically induced seiche and inundation. General Plan policies and programs are directed at minimizing these potential hazards through on-going coordination with the California Division of Dam Safety and the Coachella Valley Water District to adequately brace and baffle these facilities. However, these issues should be addressed in more detail in the EIR. (Source: "Technical Background Report to the Safety Element of the General Plan for the City of La Quinta," Earth Consultants International, November 10, 1999)
- IX.a. The proposed General Plan addresses future development within the City of La Quinta and the communities of Bermuda Dunes and Thermal, as well as surrounding areas. Implementation of the Plan is not expected to physically divide an established community.
- IX.b. Adoption and implementation of the project will result in the updating of the City's Comprehensive General Plan, and will address future development in areas currently under the jurisdiction of Riverside County. Lands in Annexation No. 12 would immediately be changed to City land use designations, which in some cases vary from existing County designations. The goals, policies and programs set forth in the proposed Plan do not appear to conflict with other applicable land use plans or regulations, including the current City General Plan or the Riverside County Comprehensive General Plan. (Source: "City of La Quinta Comprehensive General Plan," 1992; and "Riverside County Comprehensive General Plan," revised June 3, 1993)
- IX.c. General Plan policies and programs support, and are consistent with applicable habitat conservation plans, including the Coachella Valley Fringe-toed Lizard Habitat Conservation Plan. One other documents, currently under development or review, the Coachella Valley Multi-Species Habitat Conservation Plan, may have conflicting policies or implement conflicting standards. These and other associated issues should be addressed in the EIR. (Source: "City of La Quinta, Biological Assessment," Tierra Madre Consultants, Inc. December 1999)
- X.a.b. The planning area is known to contain only limited mineral resources consisting primarily of sand and gravel deposits. Other mineral resources may occur within the Santa Rosa Mountains portion of the planning area; however, the significance of these potential deposits remains undetermined. While implementation of the Plan is not expected to have a significant adverse impact on the availability of valuable mineral resources, these issues should be further addressed. (Source: Special Report 159, "Mineral Land Classification: Aggregate Materials in the Palm Springs Production-Consumption Region," California Dept. of Conservation, Division of Mines and Geology, 1988)

- XI.a. Future development facilitated by the Plan and by annexation will result in increases in construction noise and higher traffic volumes which may temporarily exceed applicable noise standards. The scope of these impacts and appropriate mitigation measures should be further evaluated in the EIR.
- XI.b. Grading and construction of future development projects in the planning area may generate temporary groundborne vibrations or groundborne noise levels. While these impacts are not expected to be excessive, they should be further assessed, and appropriate mitigation measures developed.
- XI.c.d. Development facilitated by the proposed Plan and by annexation will result in temporary and permanent increases in ambient noise levels generated by increased traffic, construction activity, and the operation of stationary sources including heaters, air conditioners and ventilation equipment. These impacts appear to be adequately mitigated through General Plan policies and programs, which include land use planning that is sensitive to surrounding land uses, and the installation of noise attenuation mechanisms such as earthen berms and sound walls. However, these issues should be examined further.
- XI.e. The Bermuda Dunes Airport is not expected to generate noise levels which exceed 65 dB, and therefore will have minimal, if any, adverse effects on people residing or working in the area. Aircraft noise generated at the Thermal Airport, however, is expected to impact a limited area to the northwest and southeast of the airport. These lands are primarily designated for industrial and low density residential development in the proposed General Plan. Potential noise impacts are expected to be adequately mitigated through the use of building setbacks, adherence to State Code requirements for airborne sound isolation in residences, and the preparation of site-specific acoustical studies, where necessary. These issues should be addressed in more detail in the EIR. (Source: Figures IV.28 and IV.36, "Riverside County Comprehensive General Plan," revised June 3, 1993)
- XI.f. The planning area is not located in the immediate vicinity of a private airstrip, and development facilitated by the Plan will not be affected by noise generated at a private airstrip.
- XII.a. Implementation of the General Plan is likely to induce population growth in the area through the development of new homes and businesses, and through the extension of roads and other infrastructure. These potential impacts should be further evaluated in the EIR.
- XII.b.c. Adoption and implementation of the proposed Plan will facilitate new development on largely vacant lands, and is not expected to displace substantial numbers of existing housing or residents. The annexation of lands will have no impact which would displace existing housing.

- XIII.a. Increased or expanded urbanization which may result from adoption of the proposed General Plan will increase the demand for fire protection services. The City will be required to expand its contract with the County to cover areas proposed for Annexation No. 12. Possible increases in traffic may also extend emergency response times. On-going consultation and coordination with the Riverside County Fire Department and the California Department of Forestry, careful review of development plans, and the enforcement of applicable fire codes, are expected to adequately mitigate these potential impacts. However, these issues should be further addressed in the EIR.

Continued urbanization in the planning area may also increase the demand for police protection services. The City will be required to expand its contract with the County to cover areas proposed for Annexation No. 12. Possible increases in traffic may lengthen emergency response times. General Plan policies and programs, which include close coordination with the Riverside County Sheriff's Department to assure adequate staffing levels, and community involvement in crime prevention, are expected to mitigate potential adverse impacts. However, these issues need to be discussed further in the EIR.

Implementation of the proposed Plan will result in new households within the planning area and an associated increase in the number of school-age children. New residences will impact the school system, and such an impact must be mitigated through the imposition of school fees.

Development facilitated by the Plan will also impact existing parks in the planning area, and generate an increased demand for additional parks and recreation facilities. These impacts need to be further assessed.

Continued urbanization of the planning area will increase impacts to public roads and other public facilities and services. These impacts should be further analyzed in the EIR.

- XIV.a. Continued urbanization and population growth facilitated by the proposed Plan has the potential to increase the demand for existing park and recreation facilities such that the quality and quantity of existing facilities may be affected. General Plan policies and programs are directed at providing an adequate public and private parks and recreation facilities. However, these issues should be further evaluated and mitigated.
- XIV.b. The proposed Plan provides for new parks and recreation facilities, the construction of which could result in adverse environmental impacts if not properly mitigated. General Plan policies and programs are directed at minimizing these impacts, and include the installation of native, drought-tolerant landscaping, the preservation of open space and passive recreation areas, and the possible use of reclaimed water for parkland irrigation. These impacts should be addressed further.

- XV.a. Implementation and buildout of the General Plan have the potential to generate substantial increases in the number of vehicular trips and traffic movements in the planning area. Development and redevelopment in the annexation area will generate more trips than currently occur there. These impacts need to be further evaluated and quantified, where possible.
- XV.b. It is unclear whether and to what extent buildout of the proposed General Plan could exceed established levels of service for designated roads. Alterations to existing traffic loads and circulation systems could affect these levels. General Plan policies and programs appear to adequately mitigate potential traffic impacts, and include the promotion of alternative modes of transportation, on-going consultation and coordination with Caltrans, thorough review of development plans and project-specific traffic impacts, and others. However, these potential impacts need to be further assessed and quantified, where possible.
- XV.c. While implementation of the proposed Plan could result in a limited increase in use of the Thermal and Bermuda Dunes Airports, it is not expected to result in a change in air traffic patterns or a significant increase in air traffic volumes.
- XV.d. Neither the annexation area nor the planning area contain any roadways with hidden or dangerous curves, nor does the General Plan propose any such roads. Visibility is generally high throughout the planning area. Although farm equipment may be encountered on some roads in the annexation area and the eastern portion of the planning area, it is a routine occurrence and is not expected to substantially increase traffic hazards.
- XV.e. Development facilitated by the proposed Plan and annexation may increase the demand for emergency response personnel and equipment, and additional traffic may increase emergency response times. The City, in conjunction with the Riverside County Fire Department and Sheriff's Department, shall review all future development plans to assure that adequate emergency access is provided to all sites.
- XV.f. Development facilitated by the proposed Plan will increase the demand for additional parking. The General Plan offers a number of mitigation measures intended to minimize these potential impacts, including development plan review, and the promotion of public transit, bicycle use, and tele-commuting to reduce the demand for parking facilities. These impacts should be further assessed in the EIR.
- XV.g. The programs and policies set forth in the proposed General Plan appear to be consistent with applicable transportation plans, including those which support alternative modes of transportation.
- XVI.a. Development facilitated by the Plan will increase the amount of wastewater generated and will require the expansion of existing wastewater collection and treatment facilities. While these impacts are not expected to exceed the requirements of the Regional Water Quality Control Board, they need to be further quantified and evaluated.

- XVI.b. Major water and wastewater system components are already in place throughout the planning area. However, continued urbanization facilitated by the proposed Plan, and the development and redevelopment of the annexation area will require new or altered systems, particularly in the southeastern portion of the planning area. These impacts should be further evaluated in the EIR.
- XVI.c. Continued urbanization facilitated by the proposed General Plan may require new storm drainage facilities or alterations to existing facilities. Very limited flood control facilities currently occur in the annexation area. General Plan policies and programs appear to minimize the potential environmental impacts associated with construction of these facilities and maximize their wildlife habitat value. However, these issues should be further assessed in the EIR.
- XVI.d. Future development facilitated by both the proposed Plan and the development and redevelopment of the annexation area will increase the demand for domestic water and will contribute to a cumulative reduction in groundwater available for use. The General Plan proposes a number of mitigation measures designed to minimize potential impacts to the water supply, including the use of drought-tolerant landscaping materials, the installation of low-flush toilets and low-flow shower heads, and coordination with water districts serving the planning area to enhance opportunities for groundwater recharge. However, these impacts should be further evaluated and quantified, where possible.
- XVI.e. The Coachella Valley Water District (CVWD) provides wastewater treatment services to much of the planning area. Although CVWD is continually expanding the capacity of its wastewater treatment facilities, future development facilitated by the General Plan may require further expansion, and these potential impacts should be assessed further in the EIR.
- XVI.f. The management and disposal of solid waste is an on-going issue of concern in the Coachella Valley. Continued urbanization will result in the generation of additional volumes of solid waste. General Plan policies and programs include the installation of recycling bins in new development and other mitigation measures intended to minimize the potential impacts to landfills. The City will continue to evaluate its solid waste disposal needs as urbanization occurs. However, these issues should be assessed further.
- XVI.g. Development facilitated by the proposed General Plan will generate increased volumes of solid waste. General Plan policies appear to be consistent with federal, state and local laws regarding the recycling and disposal of solid waste. However, these issues should be further evaluated.
- XVII.a. Approval and implementation of the proposed Plan has the potential to substantially degrade wildlife resources and have other potentially adverse impacts on sensitive, threatened, or endangered biological species and their habitats. Similar impacts to

- historic and prehistoric resources also appear possible. This potential needs to be fully assessed in the EIR.
- XVII.b. Implementation of the proposed General Plan may result in potentially considerable cumulative impacts to various environmental resources. However, it is unclear to what extent this may occur. This potential needs to be more fully assessed in the Program EIR.
- XVII.c. It is unclear whether and to what extent the Plan will contribute to environmental effects that would cause substantial adverse effects on humans, and this potential should be more fully assessed in the Program EIR.

**TRANSMITTAL MEMORANDUM
NOTICE OF PREPARATION**

CORRECTION

Date: April 20, 2001

To; Responsible Agencies and Interested Parties

From: Nicole Sauviat Criste, Planning Consultant, City of La Quinta

Subject: Correction to Amended Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for City of La Quinta Comprehensive General Plan Update, Annexation of 5,419.9 acres and Sphere of Influence Amendment of 8,205.04 acres into the City, Riverside County, California

On April 17, 2001, the City of La Quinta transmitted the above referenced Notice of Preparation. The project description incorrectly described to northern boundary of proposed Annexation No. 12 as Airport Boulevard. The correct northern boundary is Avenue 52. The boundary of Annexation No. 12 therefore should read, throughout the document (please also see attached exhibit):

"The annexation area totals 5,419.9 acres, bounded on the north by **Avenue 52**, on the east by Jackson Street, on the south by Avenue 62, and on the west by the existing City limits. The area is primarily vacant desert lands and large lot residential development (ranches and scattered residential)."

The NOP comment period will be amended to April 23 to May 23. If you commented on the original NOP and have no further comments, your original letter will be included in the Draft EIR. If you have new or additional comments, please submit them prior to May 23, 2001. You may FAX comments to the attention of Nicole Sauviat Criste, City Planning Consultant, City of La Quinta at FAX No. (760) 322-2760 within this time frame. Please also send hard copies to the City, attention Fred Baker, via mail to the address below to assure legible and reproducible originals.

Mr. Fred Baker
Principal Planner
City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253

If you have any questions regarding the enclosed or require additional information, please do not hesitate to contact me at (760) 320-9040 or Mr. Baker at the City of La Quinta (760) 777-7125.

City of La Quinta General Plan

LEGEND

Roads

Township/Range Sections

Railroads

City Limits

General Plan Planning Area

City Sphere of Influence

Annexation Area

Sphere of Influence
Amendment Area

Scale
1:90,000

0 6,250 12,500 18,750
Feet

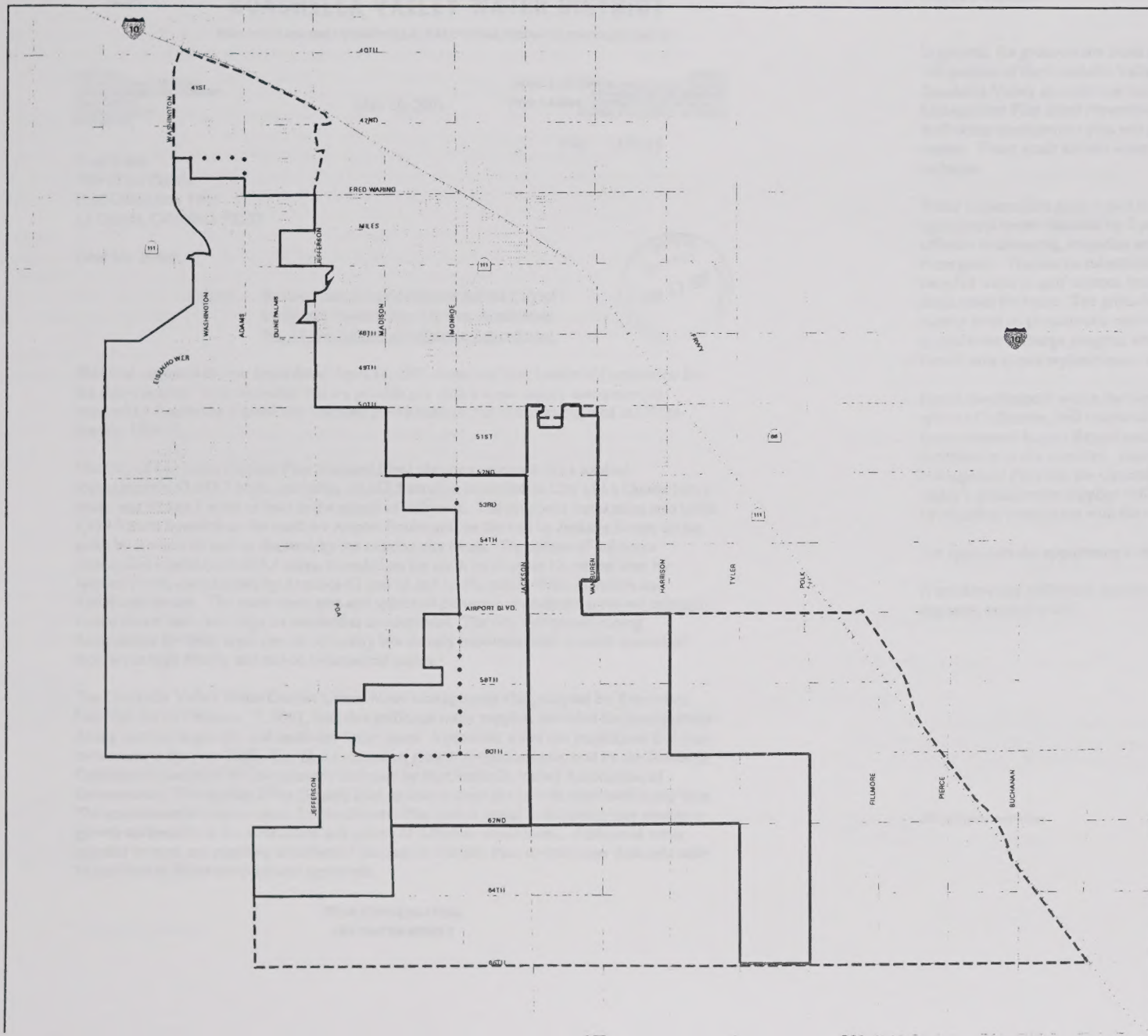
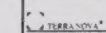


NORTH

Riverside County Vicinity Map



Map Prepared on: July 10, 2000
Map Prepared by: Aerial Information Systems





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COACHELLA VALLEY WATER DISTRICT

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REDWINE AND SHERRILL, ATTORNEYS

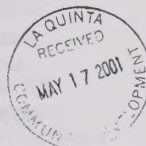
May 16, 2001

File: 1150.14

Fred Baker
City of La Quinta
Post Office Box 1504
La Quinta, California 92253

Dear Mr. Baker:

Subject: Environmental Impact Report for the City of
La Quinta General Plan Update, Annexation
No. 12 and Sphere of Influence Amendment



This is in response to your letter dated April 18, 2001 regarding your Notice of Preparation for the above project. You requested that we provide you with a water supply assessment as required by California Water Code Sections 10910 through 10915 and as outlined in CEQA Section 15083.5.

The City of La Quinta General Plan (General Plan) planning area includes a total of approximately 53,497.7 acres, including 20,253.5 acres of incorporated City of La Quinta (city) lands, and 30,168.1 acres of land in the sphere of influence. The proposed annexation area totals 5,419.9 acres bounded on the north by Airport Boulevard, on the east by Jackson Street, on the south by Avenue 62 and on the west by the existing city limits. The sphere of influence amendment consists of 8,205.4 acres, bounded on the north by Avenue 50, on the west by Jackson Street, on the south by Avenues 62 and 66 and on the east by Polk, Harrison and Van Buren Streets. The annexation area and sphere of influence amendment areas are primarily vacant desert lands and large lot residential development. The city's proposed zoning designations for these areas consist of mostly low density residential with a small amount of medium to high density and mixed commercial zoning.

The Coachella Valley Water District Urban Water Management Plan, adopted by Resolution No. 2001-10 on February 13, 2001, includes sufficient water supplies provided for development during normal, single-dry and multi-dry water years. It provides water use projections in 5-year increments to the year 2020. Our plan is based on growth projections prepared by the Southern California Association of Governments and used by the Coachella Valley Association of Governments. It is unclear if the General Plan update exceeds the growth rates used in our plan. The environmental impact report for the General Plan update needs to determine any change in growth attributable to the annexation and sphere of influence amendment. Additional water supplies to meet any resulting incremental increase in General Plan update water demands must be included in future development approvals.

TRUE CONSERVATION
USE WATER WISELY

Fred Baker
City of La Quinta

-2-

May 16, 2001

In general, the groundwater basin and our secured imported water sources can provide for 100 percent of the Coachella Valley water demand for a substantial period of time. However, the Coachella Valley groundwater basin is in a state of overdraft. The Coachella Valley Draft Water Management Plan dated November 2000 was prepared to address the valley-wide overdraft. The draft water management plan sets goals to eliminate the overdraft and replenish the groundwater supply. These goals include water conservation measures, source substitution and groundwater recharge.

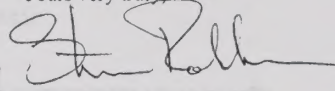
Water conservation goals stated in the plan include reducing urban water demand by 10 percent, agricultural water demands by 7 percent and existing golf course demands by 5 percent. More efficient landscaping, irrigation and plumbing and similar conservation efforts may help meet these goals. The source substitution goals stated in the plan include providing canal water and recycled water to golf courses, treating canal water for domestic use and desalting agricultural drain water for reuse. The groundwater recharge goals stated in the plan include continuing the current level of groundwater recharge in the upper valley and implementing a lower valley groundwater recharge program which will require groundwater pumpers in the lower valley benefit area to pay replenishment fees.

Future development within the General Plan area, including the annexation area and amended sphere of influence, will contribute incrementally to the valley-wide overdraft. Therefore, the Environmental Impact Report must include mitigation measures to offset the incremental contribution to the overdraft. Incorporating the goals of the Coachella Valley Draft Water Management Plan into the General Plan and conditioning future development to protect the valley's groundwater supplies will assure adequate supplies of safe, high quality water to the city by requiring compliance with the water management plan.

We appreciate the opportunity to discuss this subject.

If you have any additional questions or would like to meet with us please call Joe Cook, planning engineer, extension 292.

Yours very truly,


Tom Levy
General Manager-Chief Engineer

JEC:jlg/sw/may/baker



ESTABLISHED IN 1918 AS A PUBLIC AGENCY

COACHELLA VALLEY WATER DISTRICT

POST OFFICE BOX 1058 • COACHELLA, CALIFORNIA 92236 • TELEPHONE (760) 398-2651

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STEVEN B. ROBBINS, ASSISTANT TO GENERAL MANAGER
REDWINE AND SHERRILL, ATTORNEYS

May 17, 2001

File: 1150.14



Fred Baker, Principal Planner
City of La Quinta
Post Office Box 1504
La Quinta, California 92253

Dear Mr. Baker:

Subject: Transmittal of Amended Notice of Preparation of a Draft
Environmental Impact Report for the City of La Quinta
Comprehensive General Plan Update, Annexation of 5,419.9
Acres and Sphere of Influence Amendment of 8,205 Acres
into the City of La Quinta, Riverside County, California

We have reviewed the above-referenced document and appreciate the opportunity to provide comments.

You should include goals and policies in the Environmental Impact Report which uphold the district's ability to provide the infrastructure necessary to sustain growth. This includes implementing goals and policies that enable us to develop, expand and modernize facilities such as wastewater treatment, water recycling, water recharge, pumping and water treatment works.

You should address the impacts that growth and development within the general plan area, including the annexation area and amended sphere of influence, will have on our irrigation facilities including district and privately-owned agricultural drainage systems existing throughout the lower valley. You should provide for their continued operation as necessary to sustain existing agricultural operations.

You should include goals and policies that support implementation of our Draft Water Management Plan. Future development within the general plan area, including the annexation area and amended sphere of influence, will contribute incrementally to the valley-wide overdraft. Therefore, the Environmental Impact Report must include mitigation measures to offset the incremental contribution to the overdraft. Incorporating the goals of the Draft Water Management Plan into the general plan and conditioning future development to protect the valley's groundwater supplies will assure adequate supplies of safe, high quality water to the City of La Quinta by requiring compliance with the Water Management Plan.

TRUE CONSERVATION
USE WATER WISELY

Fred Baker, Principal Planner
City of La Quinta

-2-

May 17, 2001

We will provide further comments regarding water supply and the overdraft in our water supply assessment as was requested in your April 18 letter that was sent to us in compliance with CEQA guidelines Section 15083.5 and California Water Code Sections 10910 through 10915.

Additional comments are provided in the enclosed Attachment A.

If you have any questions please call Joe Cook, planning engineer, extension 292.

Yours very truly,

Tom Levy
General Manager-Chief Engineer

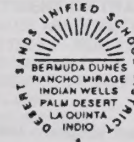
Enclosure/1/as

cc: Terra Nova Planning and Research, Inc. (with enclosure)
400 South Farrell Drive, Suite B-205
Palm Springs, California 92262

JEC:jl\eng\sw\may\baker2

ATTACHMENT A

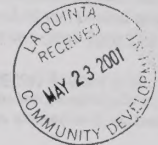
1. Page 20, Hydrology, first paragraph, fourth sentence to be revised as follows: The "Whitewater River" should be referred to as the "Coachella Valley Stormwater Channel."
2. Page 21, Hydrology, top of the page to be revised as follows: The "East La Quinta Channel" should be referred to as the "East La Quinta Stormwater System."
3. Page IV-2, Water Resources Element, under Desert Hot Springs Subbasin, first paragraph to be revised to reflect the following: In the fourth sentence, the report states, "According to CVWD's Engineer's Report on Water Supply...." This should be revised making reference to State of California Department of Water Resources Bulletin No. 108. On Page 73 of Bulletin 108, there is reference to total storage capacity of groundwater basins in the Coachella Valley.
4. Page IV-3, Water Resources Element, under Desert Hot Springs Subbasin, fifth paragraph to be revised to reflect the following: In the first sentence, the report states "According to CVWD...." This should be revised making reference to State of California Department of Water Resources Bulletin No. 108. On Page 73 of Bulletin 108, there is reference to total storage capacity of groundwater basins in the Coachella Valley.
5. Page IV-3, Water Resources Element, Whitewater River Subbasin, under the subheading "Thermal Subarea," fifth sentence to be revised to reflect the following: In the fifth sentence, the report states, "According to CVWD...." This should be revised making reference to State of California Department of Water Resources Bulletin No. 108. On Page 73 of Bulletin 108, there is reference to total storage capacity of groundwater basins in the Coachella Valley.
6. Page IV-4, Water Resources Element, Whitewater River Subbasin, under the subheading "Thousand Palms Subarea," second sentence to be revised to reflect the following: In the second sentence, the report states, "According to CVWD...." This should be revised making reference to State of California Department of Water Resources Bulletin No. 108. On Page 73 of Bulletin 108, there is reference to total storage capacity of groundwater basins in the Coachella Valley.
7. Page IV-8, Water Resource Element, Water Supply Sources, under the subheading Tertiary Treated Water, fourth sentence to read as follows: Effluent from fish farms is being recycled for use in agricultural irrigation, duck clubs and fish ponds in the lower valley.
8. Page IV-12, Water Resource Element, Goals and Policies Programs, under the subheading Policy 3, to be revised according to the following: The City of La Quinta shall encourage all forms of recycled water use as a means of reducing demand for water.



Desert Sands Unified School District
47-950 Dune Palms Road • La Quinta, California 92253 • (760) 777-4200

May 21, 2001

Fred Baker, Principal Planner
City of La Quinta
Community Development
P.O. Box 1504
La Quinta, CA 92253



Request for Comments: APN 631-300-003, 004 & 005; 631-370-017 & 018

Dear Mr. Baker:

This is in response to your request for input on the above referenced project and its effect on public schools.

All actions toward residential development will potentially result in an impact on our school system. School overcrowding is a District-wide concern for Desert Sands Unified School District. The District's ability to meet the educational needs of the public with new schools has been seriously impaired in recent years by local, state and federal budget cuts that have had a devastating impact on the financing of new schools.

As you are aware, there is a school mitigation fee that is currently collected on all new development at the time building permits are issued.

Please feel free to call me if you have further questions. Thank you.

Sincerely,

A handwritten signature in cursive script, appearing to read "Peggy Reyes".

Peggy Reyes, Director
Facilities Services

PR/pr

Myoma Dunes Mutual Water Co.

79-050 AVENUE 42
BERMUDA DUNES, CALIFORNIA 92201

April 24, 2001

Mr. Fred Baker, AICP
CITY OF LA QUINTA
P.O. Box 1504
La Quinta, CA 92253

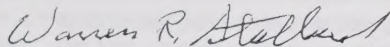
Dear Mr. Baker,

Responding to the questions of your April 18, 2001 letter directed to our company, the following information is submitted:

1. No. The La Quinta City General Plan Update was not considered in our year 2000 Urban Water Management Plan. However, the impacts of Annexation #10 were factors in the plan report.
2. Yes. Projected water supplies will meet the described demand.

Thanks for keeping us informed of matters critical to the current and future service to our customers.

Sincerely,



Warren R. Stallard
General Manager

WRS:md



STATE OF CALIFORNIA

Gray Davis, Governor

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
(916) 657-5390 - Fax



April 26, 2001

Fred Baker
City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253

RE: SCH# 2000091023 - City of La Quinta Comprehensive General Plan

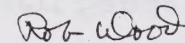
Dear Mr. Baker:

The Native American Heritage Commission has reviewed the above mentioned NOP. To adequately assess the project-related impact on archaeological resources, the Commission recommends the following actions be required:

- ✓ Contact the appropriate Information Center for a records search. The record search will determine:
 - Whether a part or all of the project area has been previously surveyed for cultural resources.
 - Whether any known cultural resources have already been recorded on or adjacent to the project area.
 - Whether the probability is low, moderate, or high that cultural resources are located within the project area.
 - Whether a survey is required to determine whether previously unrecorded cultural resources are present.
- ✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - The report containing site significance and mitigation measures should be submitted immediately to the planning department.
 - The site forms and final written report should be submitted within 3 months after work has been completed to the Information Center.
- ✓ Contact the Native American Heritage Commission for:
 - A Sacred Lands File Check.
 - A list of appropriate Native American Contacts for consultation concerning the project site and assist in the mitigation measures.
- ✓ Provisions for accidental discovery of archeological resources:
 - Lack of surface evidence of archeological resources does not preclude the existence of archeological resources. Lead agencies should include provisions for accidentally discovered archeological resources during construction per California Environmental Quality Act (CEQA) §15064.5 (f).
- ✓ Provisions for discovery of Native American human remains
 - Health and Safety Code §7050.5, CEQA §15064.5 (e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery and should be included in all environmental documents.

If you have any questions, please contact me at (916) 653-4040.

Sincerely,



Rob Wood
Associate Governmental Program Analyst

CC: State Clearinghouse

RIVERSIDE COUNTY

LARRY D. SMITH, SHERIFF



Sheriff

82-695 DR. CARREON BLVD. • INDIO, CA 92201 • (760) 863-8990

April 24, 2001

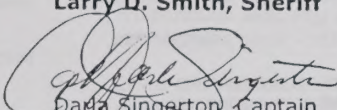
Mr. Fred Baker
Principal Planner
City of La Quinta
78495 Calle Tampico
La Quinta, Ca 92253

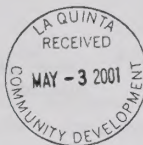
Re: NOP/Annexation No. 12

Dear Mr. Baker:

At this time the Sheriff's Department has no further comments regarding this plan.

Sincerely,
Larry D. Smith, Sheriff


Dana Singerton, Captain
Indio Station Commander



STATE OF CALIFORNIA--BUSINESS, TRANSPORTATION AND HOUSING AGENCY

GRAY DAVIS, GOV.

DEPARTMENT OF TRANSPORTATION

DIVISION OF AERONAUTICS M.S. #40

1120 N STREET - ROOM 3300

P.O. BOX 942874

SACRAMENTO, CA 94274-0001

(916) 654-4959

FAX (916) 653-9531

May 18, 2001

Mr. Fred Baker
City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253

Dear Mr. Baker:

Re: *City of La Quinta's Notice of Preparation for the Comprehensive General Plan;*
SCH# 2000091023

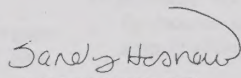
The California Department of Transportation (Caltrans) Division of Aeronautics has reviewed the above-referenced document with respect to CEQA. The following comments are offered for your consideration.

Desert Resorts Regional Airport (formerly Thermal) and Bermuda Dunes Airport are both located within the planning area of the proposed Comprehensive General Plan. According to the Notice of Preparation (NOP), airport-related noise and safety impacts will be addressed in the Environmental Impact Report (EIR). We concur. Consideration given to the issue of compatible land uses in the vicinity of an airport should help to relieve future conflict between the airport and the surrounding community. It is imperative that these airports be protected from the encroachment of incompatible land uses.

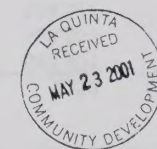
The proposal should be submitted to Keith Downs with the Riverside County Airport Land Use Commission (ALUC) to ensure that the proposal is consistent with the Bermuda Dunes Airport and Thermal Airport (Desert Resorts Regional) Comprehensive Land Use Plans (CLUPs). The proposal should also be coordinated with the staff at both airports to ensure that the proposal is compatible with future as well as existing airport operations.

Thank you for the opportunity to review and comment on this proposal. We look forward to reviewing the draft EIR. Please call me at 916/654-5314 if you have any questions.

Sincerely,


SANDY HESNARD
Environmental Planner

c : State Clearinghouse, Riverside County ALUC, Desert Resorts Reg/Bermuda Dunes Airports



ASSOCIATION OF
GOVERNMENTS

Main Office

818 West Seventh Street
12th Floor

Los Angeles, California

90017-3435

(213) 236-1800

(213) 236-1825

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Charles Dixon, Lake Forest • Alta Disher, La Palma •
Uley McCracken, Anaheim • Ben Perry, Brea

Riverside County: Bob Butler, Riverside County •
in Lodi/Riverside • Greg Pettis, Cathedral
City • Andrew Puga, Corona • Ron Roberts,
Menlo Park • Charles White, Moreno Valley

San Bernardino County: Jon Mikeli, San
Bernardino County • Bill Alexander, Rancho
San Antonio • Jim Bagley, Tremont/Palms • David
Hansen, Fontana • Lee Ann Garcia, Grand Terrace
Jewell Norton-Perry, Chino Hills • Judith Valles,
San Bernardino

San Diego County: Judy Mikeli, Ventura County •
Ana De Paola, San Buenaventura • Glen Becerra,
San Valley • Toni Young, Port Huamene

Ventura County Transportation Communications:
John Lowe, Hemet

San Diego County Transportation Communications:
T. Davis, Simi Valley

May 23, 2001

Mr. Fred Baker
Principal Planner
City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253



RE: Comments on the Corrected Notice of Preparation for a Draft
Environmental Impact Report for the City of La Quinta Comprehensive
General Plan Update - SCAG No. I 20010259

Dear Mr. Baker:

Thank you for submitting the Corrected Notice of Preparation for a Draft
Environmental Impact Report for the City of La Quinta Comprehensive General
Plan Update to SCAG for review and comment. As a statewide clearinghouse for regionally
significant projects, SCAG assists cities, counties and other agencies in reviewing projects
and plans for consistency with regional plans.

In addition, The California Environmental Quality Act requires that EIRs discuss any
inconsistencies between the proposed project and the applicable general plans and
regional plans (Section 15125 [d]). If there are inconsistencies, an explanation and
rationalization for such inconsistencies should be provided.

Policies of SCAG's Regional Comprehensive Plan and Guide and Regional
Transportation Plan, which may be applicable to your project, are outlined in the
attachment. We expect the DEIR to specifically cite the appropriate SCAG policies
and address the manner in which the Project is consistent with applicable core
policies or supportive of applicable ancillary policies. Please use our policy
numbers to refer to them in your DEIR. Also, we would encourage you to use a
side-by-side comparison of SCAG policies with a discussion of the consistency or
support of the policy with the Proposed Project.

Please provide a minimum of 45 days for SCAG to review the DEIR when this document
is available. If you have any questions regarding the attached comments, please contact
me at (213) 236-1867. Thank you.

Sincerely,

JEFFREY M. SMITH, AICP
Senior Planner
Intergovernmental Review

May 23, 2001
Mr. Fred Baker
Page 2

COMMENTS ON THE CORRECTED PROPOSAL TO DEVELOP A
DRAFT ENVIRONMENTAL IMPACT REPORT
FOR THE
CITY OF LA QUINTA
COMPREHENSIVE GENERAL PLAN UPDATE
SCAG NO. I 20010259

PROJECT DESCRIPTION

The proposed Project involves the updating of the City of La Quinta's existing General
Plan.

CONSISTENCY WITH REGIONAL COMPREHENSIVE PLAN AND GUIDE POLICIES

The Growth Management Chapter (GMC) of the Regional Comprehensive Plan and
Guide (RCPG) contains the following policies that are particularly applicable and should
be addressed in the Draft EIR for the Project.

3.01 *The population, housing, and jobs forecasts, which are adopted by SCAG's
Regional Council and that reflect local plans and policies, shall be used by SCAG
in all phases of implementation and review.*

Regional Growth Forecasts

The Draft EIR should reflect the most current SCAG forecasts which are the 2001 RTP
(April 2001) Population, Household and Employment forecasts for the Coachella Valley
Association of Governments (CVAG) subregion and the City of La Quinta. These
forecasts follow:

CVAG

Subregion

Forecasts	2000	2005	2010	2015	2020
Population	354,404	396,904	440,301	482,984	540,901
Households	122,664	130,375	149,039	166,910	188,853
Employment	140,448	157,345	174,798	185,129	194,577

**City of
La Quinta**

<u>Forecasts</u>	<u>2000</u>	<u>2005</u>	<u>2010</u>	<u>2015</u>	<u>2020</u>
Population	21,194	24,452	30,369	36,189	44,084
Households	6,813	7,750	9,490	11,154	13,199
Employment	6,879	8,603	10,383	11,434	12,404

3.03 *The timing, financing, and location of public facilities, utility systems, and transportation systems shall be used by SCAG to implement the region's growth policies.*

The **Regional Transportation Plan (RTP)** also has goals, objectives, policies and actions pertinent to this proposed project. This RTP links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic and commercial limitations. Among the relevant goals, objectives, policies and actions of the RTP are the following:

Core Regional Transportation Plan Goals

1. *Improve transportation mobility for all people and enhance the movement of goods within the subregions and the Region.*
2. *Ensure that transportation investments are cost-effective, protect the environment including improving the air quality, promote energy efficiency and enhance the quality of life.*
3. *Serve the public's transportation needs in safe, reliable and economical ways, which also meet individual needs of those who depend on public transit, such as the elderly, handicapped and disadvantaged.*
4. *Develop regional transportation solutions that complement subregional transportation systems and the land use plans of communities within the subregions.*
5. *Promote transportation strategies that are innovative and market-based, encourage new technologies and support the Southern California economy.*
6. *Encourage land use and growth patterns that enhance the livability of our communities and maximizes the productivity of transportation investments.*

Core Regional Transportation Plan Policies

4.01 *Transportation investments shall be based on SCAG's adopted Regional Performance Indicators:*

Mobility - *Transportation Systems should meet the public need for improved access, and for safe, comfortable, convenient, faster and economical movements of people and goods.*

- Average Work Trip Travel Time in Minutes – 25 minutes (Auto)
- PM Peak Freeway Travel Speed – 45 minutes (Transit)
- PM Peak Non-Freeway Travel Speed
- Percent of PM Peak Travel in Delay (Fwy)
- Percent of PM Peak Travel in Delay (Non-Fwy)

Accessibility - *Transportation system should ensure the ease with which opportunities are reached. Transportation and land use measures should be employed to ensure minimal time and cost.*

- Work Opportunities within 45 Minutes door to door travel time (Mode Neutral)
- Average transit access time

Environment - *Transportation system should sustain development and preservation of the existing system and the environment. (All Trips)*

- CO, ROG, NOx, PM10, PM2.5 – Meet the applicable SIP Emission Budget and the Transportation Conformity requirements

Reliability – *Transportation system should have reasonable and dependable levels of service by mode. (All Trips)*

- Transit – 63%
- Highway – 76%

Safety - *Transportation systems should provide minimal accident, death and injury. (All Trips)*

- Fatalities Per Million Passenger Miles – 0
- Injury Accidents – 0

Equity/Environmental Justice - *The benefits of transportation investments should be equitably distributed among all ethnic, age and income groups. (All trips)*

- By Income Groups Share of Net Benefits – Equitable Distribution of Benefits among all Income Quintiles

Cost-Effectiveness - Maximize return on transportation investment (All Trips). Air Quality, Mobility, Accessibility and Safety

- *Return on Total Investment – Optimize return on Transportation Investments*

- 4.02 *Transportation investments shall mitigate environmental impacts to an acceptable level.*
- 4.04 *Transportation Control Measures included in the State Implementation Plan (SIP) shall be a priority.*
- 4.16 *Maintaining and operating the existing transportation system will be a priority over expanding capacity.*

GMC POLICIES RELATED TO THE RCPG GOAL TO IMPROVE THE REGIONAL STANDARD OF LIVING

The Growth Management goals to develop urban forms that enable individuals to spend less income on housing cost, that minimize public and private development costs, and that enable firms to be more competitive, strengthen the regional strategic goal to stimulate the regional economy. The evaluation of the proposed project in relation to the following policies would be intended to guide efforts toward achievement of such goals and does not infer regional interference with local land use powers.

- 3.04 *Encourage local jurisdictions' efforts to achieve a balance between the types of jobs they seek to attract and housing prices.*
- 3.05 *Encourage patterns of urban development and land use, which reduce costs on infrastructure construction and make better use of existing facilities.*
- 3.08 *Encourage subregions to define an economic strategy to maintain the economic vitality of the subregion, including the development and use of marketing programs, and other economic incentives, which support attainment of subregional goals and policies.*
- 3.09 *Support local jurisdictions' efforts to minimize the cost of infrastructure and public service delivery, and efforts to seek new sources of funding for development and the provision of services.*
- 3.10 *Support local jurisdictions' actions to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness.*

GMC POLICIES RELATED TO THE RCPG GOAL TO IMPROVE THE REGIONAL QUALITY OF LIFE

The Growth Management goals to attain mobility and clean air goals and to develop urban forms that enhance quality of life, that accommodate a diversity of life styles, that preserve open space and natural resources, and that are aesthetically pleasing and preserve the character of communities, enhance the regional strategic goal of maintaining the regional quality of life. The evaluation of the proposed project in relation to the following policies would be intended to provide direction for plan implementation, and does not allude to regional mandates.

- 3.11 *Support provisions and incentives created by local jurisdictions to attract housing growth in job rich subregions and job growth in housing rich subregions.*
- 3.12 *Encourage existing or proposed local jurisdictions' programs aimed at designing land uses which encourage the use of transit and thus reduce the need for roadway expansion, reduce the number of auto trips and vehicle miles traveled, and create opportunities for residents to walk and bike.*
- 3.13 *Encourage local jurisdictions' plans that maximize the use of existing urbanized areas accessible to transit through infill and redevelopment.*
- 3.14 *Support local plans to increase density of future development located at strategic points along the regional commuter rail, transit systems, and activity centers.*
- 3.15 *Support local jurisdiction's strategies to establish mixed-use clusters and other transit-oriented developments around transit stations and along transit corridors.*
- 3.16 *Encourage developments in and around activity centers, transportation corridors, underutilized infrastructure systems, and areas needing recycling and redevelopment.*
- 3.17 *Support and encourage settlement patterns, which contain a range of urban densities.*
- 3.18 *Encourage planned development in locations least likely to cause environmental impact.*
- 3.19 *Support policies and actions that preserve open space areas identified in local, state, and federal plans.*

- 3.20 *Support the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals.*
- 3.21 *Encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites.*
- 3.22 *Discourage development, or encourage the use of special design requirements, in areas with steep slopes, high fire, flood, and seismic hazards.*
- 3.23 *Encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and to develop emergency response and recovery plans.*

GMC POLICIES RELATED TO THE RCPG GOAL TO PROVIDE SOCIAL, POLITICAL, AND CULTURAL EQUITY

The Growth Management Goal to develop urban forms that avoid economic and social polarization promotes the regional strategic goal of minimizing social and geographic disparities and of reaching equity among all segments of society. The evaluation of the proposed project in relation to the policy stated below is intended guide direction for the accomplishment of this goal, and does not infer regional mandates and interference with local land use powers.

- 3.24 *Encourage efforts of local jurisdictions in the implementation of programs that increase the supply and quality of housing and provide affordable housing as evaluated in the Regional Housing Needs Assessment.*
- 3.27 *Support local jurisdictions and other service providers in their efforts to develop sustainable communities and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational facilities, law enforcement, and fire protection.*

AIR QUALITY CHAPTER CORE ACTIONS

The Air Quality Chapter core actions related to the proposed project includes:

- 5.07 *Determine specific programs and associated actions needed (e.g., indirect source rules, enhanced use of telecommunications, provision of community based shuttle services, provision of demand management based programs, or vehicle-miles-*

traveled/emission fees) so that options to command and control regulations can be assessed.

- 5.11 *Through the environmental document review process, ensure that plans at all levels of government (regional, air basin, county, subregional and local) consider air quality, land use, transportation and economic relationships to ensure consistency and minimize conflicts.*

WATER QUALITY CHAPTER RECOMMENDATIONS AND POLICY OPTIONS

The **Water Quality Chapter** core recommendations and policy options relate to the two water quality goals: to restore and maintain the chemical, physical and biological integrity of the nation's water; and, to achieve and maintain water quality objectives that are necessary to protect all beneficial uses of all waters.

- 11.02 *Encourage "watershed management" programs and strategies, recognizing the primary role of local governments in such efforts.*
- 11.05 *Support regional efforts to identify and cooperatively plan for wetlands to facilitate both sustaining the amount and quality of wetlands in the region and expediting the process for obtaining wetlands permits.*
- 11.06 *Clean up the contamination in the region's major groundwater aquifers since its water supply is critical to the long-term economic and environmental health of the region. The financing of such clean-ups should leverage state and federal resources and minimize significant impacts on the local economy.*
- 11.07 *Encourage water reclamation throughout the region where it is cost-effective, feasible, and appropriate to reduce reliance on imported water and wastewater discharges. Current administrative impediments to increased use of wastewater should be addressed.*
- 11.08 *Ensure wastewater treatment agency facility planning and facility development be consistent with population projection contained in the RCPG, while taking into account the need to build wastewater treatment facilities in cost-effective increments of capacity, the need to build well enough in advance to reliably meet unanticipated service and storm water demands, and the need to provide standby capacity for public safety and environmental protection objectives.*

OPEN SPACE CHAPTER ANCILLARY GOALS

Outdoor Recreation

- 9.01 *Provide adequate land resources to meet the outdoor recreation needs of the present and future residents in the region and to promote tourism in the region.*
- 9.02 *Increase the accessibility to open space lands for outdoor recreation.*
- 9.03 *Promote self-sustaining regional recreation resources and facilities.*

Public Health and Safety

- 9.04 *Maintain open space for adequate protection of lives and properties against natural and man-made hazards.*
- 9.05 *Minimize potentially hazardous developments in hillsides, canyons, areas susceptible to flooding, earthquakes, wildfire and other known hazards, and areas with limited access for emergency equipment.*
- 9.06 *Minimize public expenditure for infrastructure and facilities to support urban type uses in areas where public health and safety could not be guaranteed.*

Resource Production

- 9.07 *Maintain adequate viable resource production lands, particularly lands devoted to commercial agriculture and mining operations.*

Resource Protection

- 9.08 *Develop well-managed viable ecosystems or known habitats of rare, threatened and endangered species, including wetlands.*

CONCLUSIONS

All feasible measures needed to mitigate any potentially negative regional impacts associated with the proposed project should be implemented and monitored, as required by CEQA.

--- ENDNOTE

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

Roles and Authorities

SCAG is a *Joint Powers Agency* established under California Government Code Section 6502 et seq. Under federal and state law, SCAG is designated as a Council of Governments (COG), a Regional Transportation Planning Agency (RTPA), and a Metropolitan Planning Organization (MPO). SCAG's mandated roles and responsibilities include the following:

SCAG is designated by the federal government as the Region's *Metropolitan Planning Organization* and mandated to maintain a continuing, cooperative, and comprehensive transportation planning process resulting in a Regional Transportation Plan and a Regional Transportation Improvement Program pursuant to 23 U.S.C. §134(g)-(h), 49 U.S.C. §1607(f)-(g) et seq., 23 C.F.R. §450, and 49 C.F.R. §613. SCAG is also the designated *Regional Transportation Planning Agency*, and as such is responsible for both preparation of the Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP) under California Government Code Section 65080.

SCAG is responsible for developing the demographic projections and the integrated land use, housing, employment, and transportation programs, measures, and strategies portions of the *South Coast Air Quality Management Plan*, pursuant to California Health and Safety Code Section 40460(b)-(c). SCAG is also designated under 42 U.S.C. §7504(a) as a *Co-Lead Agency* for air quality planning for the Central Coast and Southeast Desert Air Basin District.

SCAG is responsible under the Federal Clean Air Act for determining *Conformity* of Projects, Plans and Programs to the Air Plan, pursuant to 42 U.S.C. §7506.

Pursuant to California Government Code Section 65089.2, SCAG is responsible for *reviewing all Congestion Management Plans (CMPs) for consistency with regional transportation plans* required by Section 65080 of the Government Code. SCAG must also evaluate the consistency and compatibility of such programs within the region.

SCAG is the authorized regional agency for *Inter-Governmental Review* of Programs proposed for federal financial assistance and direct development activities, pursuant to Presidential Executive Order 12,372 (replacing A-95 Review).

SCAG reviews, pursuant to Public Resources Code Sections 21083 and 21087, *Environmental Impact Reports* of projects of regional significance for consistency with regional plans [California Environmental Quality Act Guidelines Sections 15206 and 15125(b)].

Pursuant to 33 U.S.C. §1288(a)(2) (Section 208 of the Federal Water Pollution Control Act), SCAG is the authorized *Areawide Waste Treatment Management Planning Agency*.

SCAG is responsible for preparation of the *Regional Housing Needs Assessment*, pursuant to California Government Code Section 65584(a).

SCAG is responsible (with the San Diego Association of Governments and the Santa Barbara County/Cities Area Planning Council) for preparing the *Southern California Hazardous Waste Management Plan* pursuant to California Health and Safety Code Section 25135.3.



A Sempra Energy company

May 1, 2001

City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253

Attention: Fred Baker

Re: Draft EIR – Comprehensive General Plan Update – Avenue 52/Jackson Street.

Thank you for the opportunity to respond to the above-referenced project. Please note that Southern California Gas Company has facilities in the area where the above named project is proposed. Gas service to the project could be provided without any significant impact on the environment. The service would be in accordance with the Company's policies and extension rules on file with the California Public Utilities Commission at the time contractual arrangements are made.

You should be aware that this letter is not to be interpreted as a contractual commitment to serve the proposed project, but only as an informational service. The availability of natural gas service, as set forth in this letter, is based upon present conditions of gas supply and regulatory policies. As a public utility, The Southern California Gas Company is under the jurisdiction of the California Public Utilities Commission. We can also be affected by actions of federal regulatory agencies. Should these agencies take any action, which affects gas supply, or the conditions under which service is available, gas service will be provided in accordance with revised conditions.

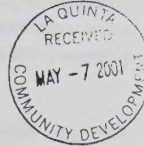
Typical demand use for:

- | | |
|------------------------------|---|
| a. Residential | (System Area Average/Use Per Meter) <u>Yearly</u> |
| Single Family | 799 therms/year dwelling unit |
| Multi-Family 4 or less units | 482 therms/year dwelling unit |
| Multi-Family 5 or more units | 483 therms/year dwelling unit |

These averages are based on total gas consumption in residential units served by Southern California Gas Company, and it should not be implied that any particular home, apartment or tract of homes will use these amounts of energy.

Southern California
Gas Company
1981 W. Luqonia Avenue
Redlands, CA 92374-9720

Mailing Address:
PO Box 3003, SC8031
Redlands, CA 92373-0306



b. Commercial

Due to the fact that construction varies so widely (a glass building vs. a heavily insulated building) and there is such a wide variation in types of materials and equipment used, a typical demand figure is not available for this type of construction. Calculations would need to be made after the building has been designed.

We have Demand Side Management programs available to commercial/industrial customers to provide assistance in selecting the most effective applications of energy conservation techniques for a particular project. If you desire further information on any of our energy conservation programs, please contact our Commercial/Industrial Support Center at 1-800-GAS-2000.

Sincerely,

John DeWitt
Technical Supervisor

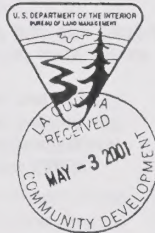


United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Palm Springs-South Coast Field Office
690 West Garnet Avenue
P.O. Box 581260
North Palm Springs, CA 92258-1260

Visit us on the Internet at
www.ca.blm.gov/palmsprings



IN REPLY REFER TO:
1795P
CA660.31

APR 30 2001

Fred Baker, Principal Planner
City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253

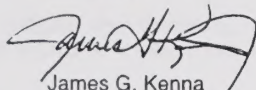
Dear Mr. Baker:

We appreciate the opportunity to review the Amended Notice of Preparation of a Draft Environmental Impact Report for the City of La Quinta Comprehensive General Plan Update, Annexation of 5,419.9 acres and Sphere of Influence Amendment of 8,205.04 acres into the City of La Quinta.

Upon review of the general plan map, we noticed that there are several sections of BLM-managed lands included in the City's Sphere of Influence and City Limits. We do not oppose inclusion of the BLM-managed public lands within the city's boundaries. The BLM would appreciate acknowledgment of its management responsibilities under the Federal Land Policy Management Act of 1976, wilderness designations under the California Desert Protection Act of 1994, and the Santa Rosa and San Jacinto Mountains National Monument Act of 2000.

We appreciate the city's efforts through City Zoning Ordinance to limit impacts to scenic vistas of the Santa Rosa and Coral Reef Mountains and efforts to maintain the night skies. If you would like additional information about BLM's management responsibilities for the public lands, please contact Ms. Elena Miguez of my staff at (760) 251-4810.

Sincerely,


James G. Kenna
Field Manager

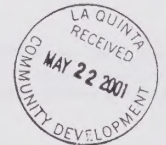
ELLEN LLOYD TROVER

OFFICE:
1107 E. THOUSAND OAKS BLVD.
THOUSAND OAKS, CA 91362-9230
TEL 805 497-4911
FAX 805 496-1757

RANCHO ELENITA:
NORTHEAST CORNER OF AVE. 54 & MONROE ST.
P.O. BOX 297
COACHELLA, CA 92236
TEL 760 398-3971

May 21, 2001

Mr. Fred Baker, Principal Planner
City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253



On behalf of the Vista Santa Rosa Community Council, and personally, I have the following comments on the Notice of Preparation of an Environmental Impact Report for the City of La Quinta General Plan Update, Annexation No. 12 and Sphere of Influence Amendment, in the County of Riverside, California:

1) We believe it is premature for the City to prepare an EIR and General Plan update for lands east of the present city limits, as the residents of this area have voiced their opposition to an annexation and/or expansion of the La Quinta sphere of influence. Residents of the area bounded by Ave 52 (north), the City of Coachella & Highway 86 (east), Ave. 66 (south), and Monroe Street (west) have petitioned the Riverside County LAFCO for Community of Interest designation under the name Vista Santa Rosa. Additionally, it is our understanding that residents and/or owners of adjacent land in unincorporated areas may petition to be included in the Vista Santa Rosa Community of Interest.

Pending LAFCO's decision and the outcome of the study to be conducted under a Community of Interest, we believe it is premature for the City to go forward with the EIR for the currently unincorporated area.

2) In light of the State policy to protect prime agricultural land and discourage urban sprawl, expansion of the City to the east is unwarranted and unnecessary since the Notice states that approximately 49% (9,879 acres) of the incorporated land within the City is currently vacant.

3) Under the proposed land use designations, we contest the omission of equestrian uses whether private horse ranches or commercial stables, or whether these uses fall within the definition of "Agricultural

etrover@yahoo.com

-1-

Overlay." Based on the historical use of the land in the area and the economic importance of the "horse industry" to the region, these uses should be allowed and taken into consideration when preparing the EIR.

4) Under the proposed land use designations, we contest the definition of "Agricultural Overlay" to only allow agricultural land uses to continue "as they occur at the time this General Plan is adopted." Considering the economic importance of agriculture to the Coachella Valley, agricultural use of the land should be encouraged and undeveloped land should be allowed to be put under cultivation; additionally, we consider this definition to be confusing on the issue of whether agricultural use can continue when ownership of the land changes. The EIR should address potential agricultural use of all land not currently developed as residential property.

5) Upon examination of the Notice and maps, we find no provision for equestrian trails. We contend that provision should be made for preservation of existing trails and development of new trails and the EIR should address these issues.

6) No provision has been expressly made regarding farm sales, home occupancy businesses, or the possibility of development of cottage industries, etc., as defined in Riverside County Ordinance 17.120.010. It is unclear whether the "Agricultural Overlay" includes such use and whether new "businesses" can be opened on land currently used in agriculture and/or whether new land can be added to the "Agricultural Overlay" uses. Since it is our belief that current residents of the unincorporated area may intend to pursue such activities, the EIR should address the impact of such usage.

With respect to the Areas of Potential Environmental Concern:

1) We are concerned that the City plan to allow extensive residential development to the east of the current city limits will create many traffic problems, including, but not limited to:

- a) the difficulty of moving farm equipment on heavily trafficked roads;
 - b) the danger to horses and their riders;
 - c) the danger to hikers and bicyclists;
 - d) the increased noise and pollution and its impact on residents, horses, livestock, and agriculture;
- and,
- e) the widening of roads causing lost of existing structures, landscaping, and other use of frontage land.

2) As residents of the eastern area, we are concerned that sufficient attention be paid to geologic

conditions such as flooding and potential liquefaction, and whether the hazards are exacerbated by denser development, more paving, golf courses, and artificial lakes, plus the impact of these changes on the aquifer.

3) We are concerned that the issue of air pollution is not adequately addressed by the proposed study of "occasional and temporary exceedances of both state and federal standards for various pollutants." Indeed, there should be a complete study of the impact of increased pollution, especially in light of studies showing the vast majority of vehicular pollution comes in the start and warm up of vehicles (i.e. the first 15 minutes).

4) We feel the study does not adequately provide for study of the wind born sand (loam), which will be greatly increased by the construction anticipated by the Plan. Although the Notice states that the "northern portion of the planning area is subject to strong, sustained winds", etc., the land to the east is also subject to strong, sustained winds, blowing sand and wind erosion albeit somewhat different from the northern area. At the present time, projects within the City create horrific blowing sand problems for residents to the east including respiratory problems, visibility for vehicles, expense of sand removal from driveways, etc., as well as the nuisance to houses and landscaping.

5) The N.O.P. does not adequately address study of energy and water usage with increased residential development. In light of the current energy crises and extreme summer temperatures in the area, a study of power use and availability is crucial, both in the short term and as "buildout" progresses. Additionally, changing water use in the Western states, lowering of the aquifers, etc., make study of new water use for residents, golf courses, artificial lakes, etc. necessary.

In general, we feel that the current N.O.P. fails to adequately address the impact of development on the residents and property owners of the areas east of the present City limits who do not intend to develop their land within the foreseeable future, and that each and every issue raised within the N.O.P. should be reconsidered with respect to the effect of residential development on the current users of the land, and vice versa, including but not limited to, noise, traffic, location and types of commercial use, pollution, change of drainage patterns, lighting, traffic patterns, size of streets, odors, etc. Residents of the Vista Santa Rosa area already feel the quality of their air, life, etc. have been severely negatively impacted by development within the City.

Respectfully yours,

Ellen Lloyd Trover

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APPENDIX B

Cultural Resources Element
City of La Quinta General Plan

Prepared by

Bruce Love, Principal Investigator

Bai "Tom" Tang, Historian

CRM TECH

2411 Sunset Drive

Riverside, CA 92506

August 2, 2000

CULTURAL RESOURCES ELEMENT CITY OF LA QUINTA GENERAL PLAN

Submitted by:

Bruce Love, Principal Investigator
Bai "Tom" Tang, Historian
CRM TECH
2411 Sunset Drive
Riverside, CA 92506

August 2, 2000
CRM TECH Contract # 538

Figure List:

Exhibit 5-1. The planning area in 1855-1856. (Source: GLO 1856a-h)

Exhibit 5-2. The planning area in 1901. (Source: USGS 1904)

Exhibit 5-3. The planning area in 1903-1912. (Source: GLO 1903; 1905a-c; 1909a-b; 1914a-b)

Exhibit 5-4. The planning area in 1941. (Source: USGS 1941a-c; 1944)

Exhibit 5-5. The planning area in the 1950s. (Source: USGS 1956; 1958a-b; 1959)

Exhibit 5-6. Previous cultural resources studies and known heritage properties within or near the planning area. In addition to these project-related surveys, two city-wide, reconnaissance-level historic building surveys also took place within the city boundaries.



5.6 Cultural Resources

The term "cultural resource" refers to any physical evidence of human activities that possesses potential historical, archaeological, or traditional cultural value. Among such evidences that are most frequently noted as cultural resources are buildings, structures, historic districts, archaeological sites, and such objects as statues and street fixtures. In recent years, cultural resources also began to include non-traditional property types, including cultural landscapes, such as citrus groves and date gardens, and natural features that have acquired cultural significance in history, such as Point Happy in La Quinta. In order to be potentially significant, cultural resources usually need to meet a certain age criterion. In the State of California, the age threshold is generally set at the end of WWII.

5.6.1 Regional Historic Context

Prehistory

The "prehistoric period" refers to a time prior to the arrival of non-native peoples. In the vicinity of present-day La Quinta, foreign influences brought profound changes to Indian lifeways commencing in the late 1700s, which marked the beginning of the "historic period."

In the Coachella Valley, the prehistoric period is generally divided into the Late Prehistoric and the Archaic Periods. The transition between these two periods is thought to be around AD 1000, marked by the introduction of pottery by the Colorado River cultures. For this reason, the Archaic Period is sometimes also referred to as the "pre-ceramic" period. Other important cultural changes in prehistoric times were the introduction of the bow-and-arrow, probably around AD 500, and the change from burial practices to cremations, perhaps around 500 BC. Students of historical linguistics propose a migration of Takic speakers sometime between 1000 BC and AD 500 from the Great Basin region of Nevada, Utah, and eastern California into southern California.

For purposes of this historic preservation element, the introduction of pottery is used as the point separating Archaic from Late Prehistoric, although it would also be acceptable to use other significant events in prehistory, for example the introduction of the bow-and-arrow. As work proceeds, in part under the mandate of federal, state, and city historic preservation regulations, the important nodes marking cultural change over past centuries and millennia will become more clearly defined.

Ethnohistory

The Coachella Valley is a historical center of Native American settlement, where a large number of Indian villages and *rancherías*, occupied by the Cahuilla people, were observed in the mid-19th century. The Cahuilla, a Takic-speaking people of hunters and gatherers, are generally divided by anthropologists into three groups, according to their geographic setting: the Pass Cahuilla in the San Geronimo Pass-Palm Springs area, the Mountain Cahuilla in the San Jacinto and Santa Rosa Mountains and the Cahuilla Valley, and the Desert Cahuilla in the eastern Coachella Valley.

The Cahuilla did not have a single name that referred to an all-inclusive tribal affiliation. Instead, membership was in terms of lineages or clans. Each lineage or clan belonged to one of two main divisions of the people, known as moieties. Members of clans in one division, or moiety, had to marry into clans from the other division. Individual clans had villages, or central places, and territories for purposes of hunting game, gathering food, or utilizing other necessary resources. They interacted with other clans through trade, intermarriage, and ceremonies. It should be noted that the Cahuilla people have their own history, recorded and recited in their Bird Songs, which also include tales of long migrations.

Population data prior to European contact are estimated to range from 3,600 to as high as 10,000 persons. During the 19th century, however, the Cahuilla population was decimated as a result of European diseases, most notably smallpox, for which the Native

peoples had no immunity. Today, Native Americans of Desert and Pass Cahuilla heritage are mostly affiliated with one or more of the Indian reservations in the Coachella Valley, including Torres Martinez, Augustine, Agua Caliente, Cabazon, and Morongo, most of which are located in close proximity to the City of La Quinta. Although only a few elders can remember the old ways or speak the Cahuilla language, there appears to be renewed interest in their cultural history among many tribal members.

Early Explorations

An ancient Indian trading route, the Cocomaricopa Trail, ran through the Coachella Valley and connected the coastal region of California to areas along the Colorado River. The trail was first used by Europeans in 1815, when salt miners from the San Gabriel Mission began to travel occasionally to the Salton Sink. In 1823-1825, José Romero, José Maria Estudillo, and Romualdo Pacheco led an expedition along the same route through the Coachella Valley in search of a road to Yuma, thus becoming the first noted European explorers to travel through the desert around the planning area.

In 1862, in the aftermath of the La Paz gold rush on the Colorado River, the entire route of the Cocomaricopa Trail was "rediscovered" by William David Bradshaw, and became known as the Bradshaw Trail. For the next 15 years, it served as the main thoroughfare between the Los Angeles area and the gold fields near present-day Ehrenberg, Arizona. By the late 1870s, however, the depletion of the La Paz gold mines and the construction of the Southern Pacific Railroad's Coachella Valley line (1876-1877) brought an end to the regular use of the Trail. During the 1910s-1920s, the role of this historic wagon road as a transportation artery was succeeded by modern automobile highways, including the Ocean-to-Ocean Highway (U.S. Route 60) and what became today's Highway 111, which closely follows the route of the Bradshaw Trail.

Settlement and Growth

Non-Indian settlement in the Coachella Valley began in the 1870s, with the establishment of railroad stations along the Southern Pacific

line, and spread further in the 1880s, after public land was opened for claims under the Homestead Act, the Desert Land Act, and other federal land laws. Farming became the dominant economic activity in the valley, thanks to the development of underground water sources. But it was not until the completion of the Coachella Canal in 1948-1949 that the region obtained an adequate and reliable water supply. The main agricultural staple in the Coachella Valley, the date palm, was first introduced around the turn of the century, and thrived by the late 1910s. Starting in the 1920s, the tourist industry, with its equestrian camps, resort hotels, and eventually country clubs, gradually spread throughout the Coachella Valley and became the driving force in local economy.

In the City of La Quinta, the earliest settlement and land development activities occurred around the turn of the century. In 1926, with the construction of the La Quinta Hotel, the development of La Quinta took on the character of a winter resort. Beginning in the early 1930s, the subdivision of the cove area and the marketing of "weekend homes" further accelerated the development of La Quinta. On May 1, 1982, La Quinta was incorporated as the 19th city in Riverside County.

5.6.2 Overview of La Quinta History

The growth of La Quinta has been recorded by five series of historical maps in sufficient detail to aid in cultural resources considerations: township plat maps produced by the U.S. General Land Office (GLO) based on surveys conducted in 1855-1856 and 1903-1912; topographic maps produced by the United States Geological Survey (USGS) based on surveys conducted in 1901; and aerial photographs taken in 1941 and 1951-1956. Depictions of the planning area in these maps are reproduced in Exhibits 1-5.

Native American Land Use

In the mid-1850s, during the earliest GLO surveys of the La Quinta area, surveyors noted a total of eight Indian villages or *rancherías* in or near the planning area (Exhibit 5-1). Based on their locations,

almost all of these were important settlements of the Desert or Pass Cahuilla people, as identified in current ethnographic literature. One of the most prominent among these settlements was the village of Toro (or Torros, Torres), located in Section 2, T7S R7E, in the southern portion of the planning area (Exhibit 5-1). Named *Mauulmii* ("Place of the Palm Tree") in the Cahuilla language, the village was the home of the *Tamolanicem* and the *Sawalakikikum* clans, and later became a major stop on the Bradshaw Trail (Bean et al. 1991:24, 62). A second settlement in the planning area, a *ranchería* in Section 19, T6S R8E (Exhibit 5-1), was probably associated with the well-known village of La Mesa, home of the *Telikikum* and the *Sewahilem* clans (Strong 1929:39, 41-42; Bean et al. 57, 89).

A third Cahuilla village within the planning area, known as *Kotevewit*, was reportedly located "about five miles south of Point Happy and a short distance from the present La Quinta Hotel" (*ibid.*). This village was not noted by the early surveyors, and Strong (1929:86) describes the location of *Kotevewit* as somewhere "in the mountains."

Six other Cahuilla settlements were noted in the mid-1850s within an approximately one-mile radius of the planning area (Exhibit 5-1). These include the Indian *ranchería* in Section 24, T5S R6E, generally acknowledged to be the village of Kavinish; a *ranchería* in Section 8, T6S R8E, possibly also a part of La Mesa; two *rancherías* in Section 16, T7S R8E, both apparently associated with the village of *Puichekiva* near Martinez; another *ranchería* in Section 25, T6S R8E; and "Cabezon's village" in Section 6, T7S R9E (Strong 1929:39, 41-42, 89; Bean et al. 45, 57, 182). Cabezon's village, known as *Tuikikum Hemki*, was one of the four under the leadership of the 19th century Desert Cahuilla chief Old, Old Cabezon, and may have been his home village (Love et al. 1999:27-35).

In addition to these villages and *rancherías*, a number of other man-made features, evidence of Native American activities, were observed within the planning area. These features include a system of roads and trails crisscrossing the desert floor and several wells, most notable among which was the

Palma Seca Well, also known as Indian Well (Exhibit 5-1). The principal road shown on these maps, which ran a generally northwest-southeast course through the planning area between Palma Seca Well and the village of Toro (Exhibit 5-1), was a part of the Bradshaw Trail (Johnston 1987:112, 115-116).

20th Century Development

By the early 20th century, when the La Quinta area was again surveyed systematically by the U.S. government, most of the villages and *rancherías* of the mid-1850s no longer existed (Exhibits 5-2, 5-3), reflecting the decline of the Cahuilla's population and prosperity during the latter half of the 19th century. Maps from this period show signs of Euroamerican influence, including fences and irrigation ditches, along with the Bradshaw Trail and the Southern Pacific Railroad (Exhibits 5-2, 5-3).

In March, 1902, the oldest community in the planning area was created when H. W. Cottle & Co. filed the plat for a townsite at the Southern Pacific station of Kokell, later renamed Thermal (Gunther 1984:270, 542). The first artesian well in the Valley was drilled by the Southern Pacific Railroad at Thermal (Brown and Boyd 1922:586), leading to the expansion of agricultural development of the valley.

As mentioned previously, the first recorded settlement and land development attempts in the City of La Quinta took place around the turn of the century. During the next few decades the GLO approved and patented 54 land grants in La Quinta (City of La Quinta 1997:24). By the 1910s, several early ranches were in operation in La Quinta, including the Manning Burkett Ranch, the John Marshall Ranch (later known as Hacienda del Gato), and the Point Happy Ranch (*ibid.*:26-27).

In 1926, Walter H. Morgan's Desert Development Company began the construction of the La Quinta Hotel. Other developers continued to pursue and expand Morgan's vision of La Quinta as a resort town to rival its more famous neighbor to the west, Palm Springs. In the early 1930s, E. S.

"Harry" Kiener subdivided the cove area in Sections 1, 12 and 13, T6S R6E, into residential lots, which marked the creation of La Quinta as a community.

The 1941 series of USGS maps clearly reflect these developments. As Exhibit 5-4 illustrates, by 1941 the cove area had seen substantial development, especially in the northern half of the subdivision, north of today's Calle Chihuahua. Farther to the north, the La Quinta Hotel complex occupied a substantial portion of Section 36, T5S R6E (Exhibit 5-4). At the easterly end of the planning area, the town of Thermal is shown in the northwestern corner of Section 22, T6S R8E (Exhibit 5-4). The rest of the planning area demonstrated a typical rural settlement pattern, with scattered ranch houses connected by roads laid out mostly along section or quarter-section lines (Exhibit 5-4).

Between 1940 and 1955, the number of buildings in the planning area increased significantly, especially in the cove area and around Thermal, as the Coachella Valley experienced rapid growth (Exhibit 5-5). In the meantime, the contrast between the different settlement patterns in the town centers and the outlying rural area persisted, as it still does to some degree to the present day.

5.6.3 Overview of Known Archaeological Resources

Because of its unique geographical location straddling the shoreline of ancient Lake Cahuilla, a naturally occurring freshwater lake formed by overflow from the Colorado River, the City of La Quinta contains one of the most dense concentrations of archaeological sites anywhere in California.

Records on file at the Eastern Information Center indicate that approximately 50-60% of the planning area has been covered by project-related cultural resources surveys since the 1970s (Exhibit 5-6). In particular, in the easterly portion of the city limits, where continuous urbanization has occurred at a rapid rate during the last few decades, most of the acreage has been surveyed. The mountainous southwesterly portion of the city

and the portions of the planning area outside the city limits, however, have received only limited attention.

As a result of these earlier surveys, 401 archaeological sites, both prehistoric and historic, have been identified and recorded in and around the planning area. Appendix 1 offers a complete list of archaeological sites recorded in and within one mile of the planning area.

Archaeological sites can reflect past human activities from thousands of years ago to as little as 50 years ago, and can include evidence of ancient stone tool making to more recent date farming. The vast majority of archaeological sites in the City and its planning area represent Native American settlement associated with ancient Lake Cahuilla, whose shoreline occurred at the 42-foot elevation. Scatters of pottery, burned animal bone, grinding stones, chipped stone, cremations, and other remains have been recorded along the shoreline, providing evidence of what must have been a very dense population in the 17th and 18th centuries, prior to the arrival of the first settlers. The last high stand of Lake Cahuilla, a naturally occurring freshwater lake formed by overflow from the Colorado River, is now thought to have been around AD 1650. The water receded rapidly after that, and the Lake is believed to have been completely desiccated within 80 to 100 years. As the lake receded, native settlements followed, leaving archaeological remnants of village sites well below the 42-foot contour. When the lake disappeared altogether, shallow walk-in water wells were dug to expose the easily accessible water table, often just a few feet below the ground surface, allowing communities to continue to survive.

While most of La Quinta's archaeological sites date to this late prehistoric period, recent research has discovered sites dating from earlier times, especially sites buried deep within sand dunes. One site immediately east of the City limits, near the intersection of Jefferson Street and Fred Waring Drive, has proven to be 2700 years old, the oldest site yet recorded in the Coachella Valley (Love 1996). Within the city limits, sites have been

dated to 1600-2300 years ago. These earlier sites were also related to ancient Lake Cahuilla, which provided rich resources for Native Americans.

5.6.4 Overview of Known Historical Resources

From 1981 to 1983, the Riverside County Historical Commission coordinated a county-wide historical resources reconnaissance, which led to the recordation of 36 historic buildings or building groups, a historic cemetery, and a historic canal inside or within one mile of the planning area. In 1996 and 1997, the City of La Quinta initiated its own city-wide historical resources survey, adding 67 properties to the inventory, mostly historic buildings (Mellon and Associates 1997). From 1997 to 1999, 18 other structures have been recorded during project-related surveys. The oldest of the historic sites currently in the inventory, a cemetery and the Catholic church on the Torres-Martinez Indian Reservation, date to 1876 and 1894, respectively. The majority of the historic buildings, structures, and other features recorded in the planning area are of late-1930s or 1940s vintages. These historical resources are listed in Appendix 2.

In addition to recording individual buildings, the 1996-1997 city-wide survey designated the cove area, La Quinta's first residential subdivision, as a historic district (O'Conner and Steigemeyer 1997). The majority of the buildings listed in Appendix 2 are found within the district, which is bounded by Calle Tampico on the north, Avenida Bermudas on the east, Calle Tecate on the south, and Avenida Montezuma and Bear Creek on the west. Historic buildings in the cove district are almost uniformly of the Spanish Colonial Revival style, introduced to the region by the 1926 La Quinta Hotel (Mellon and Associates 1997).

5.6.5 Cultural Resources Sensitivity Analysis

The number of recorded sites in the planning area clearly demonstrates that virtually no undeveloped land should be considered free of cultural resources. Slopes and hillsides

have been shown to contain ancient trails and carved boulders. Rocky alluvial fans have been found to contain fields of rock cairns associated with big horn sheep hunting. Sand dunes have covered evidence of more than two millennia of Indian occupation associated with ancient Lake Cahuilla. Finally, the Valley floor in the eastern portion of the planning area, now mostly in agriculture, was home to the Cahuilla people and early settlers.

The potential sensitivity of agricultural lands cannot be discounted. An archaeological survey prepared for a large project on agricultural lands in the southwestern portion of the planning area reported more than 30 prehistoric archaeological sites, including major concentrations of artifacts marking Indian village sites. Plowing and disking has been shown to disturb artifacts, but not destroy or remove them.

5.6.6 Existing Historic Preservation Programs

Since the mid-1960s, federal and state legislation has created a number of opportunities to help local communities preserve their past. The City of La Quinta has taken advantage of some of these programs, while others remain to be established and implemented.

Federal Programs Available to the City
The National Historic Preservation Act (NHPA) of 1966, as amended, mandates that all Federal agencies assume responsibility for the preservation of historic properties owned or controlled by the U.S. government. Section 106 of NHPA requires federal agencies to take into account the effect of a project on any historic properties prior to approval of the project. In practice, many federal agencies afford an enhanced role for Certified Local Governments (CLG) in the Section 106 process.

The CLG program, a joint federal-state initiative administered by the National Park Service and the State Historic Preservation Officers (SHPO) of each state, provides technical assistance and small grants for historic preservation purposes to local governments that meet certain requirements.

A CLG since 1995, the City of La Quinta is encouraged by the State Office of Historic Preservation (OHP) to play an active role in the Section 106 process within its jurisdiction. Furthermore, when delegated the responsibility for Section 106 compliance, the city may also take the lead in the enforcement of NHPA.

In conjunction with NHPA, the Secretary of the Interior maintains the National Register of Historic Places, a nation-wide inventory of districts, sites, buildings, structures, objects, or other features of national, state, or local historical significance. According to statutory definition, any property listed in or determined to be eligible for listing in the National Register constitutes a "historic property." At present, two properties adjacent to the southern boundary of the planning area are listed in the National Register: the Coachella Valley Fish Traps and the Martinez Historic District (Exhibit 5-6). Numerous archaeological sites within the planning area have been evaluated as eligible for listing in the National Register.

In addition to NHPA, a number of other federal statutes also provide for programs aimed at the preservation of important cultural resource, including investment tax credits on certified rehabilitation of historic buildings, the Community Development Block Grant Program, and the historic building preservation program created by the Transportation Equity Act of 1998.

State Programs Available to the City

The California Register of Historic Resources, established in 1992, is the State of California's counterpart to the National Register of Historic Places. Its listings include all properties listed in or officially determined eligible for listing in the National Register.

Together with the California Register, the Office of Historic Preservation (OHP) maintains two other registers to promote historic preservation in the state: California Historical Landmarks, a designation for properties of state-wide historic importance, and Points of Historical Interest, for properties of county-wide or regional

importance. At present, there is one designated Point of Historical Interest within the planning area, the site of Toro, and three within one mile of its boundaries: the site of Palma Seca Well, the Martinez Indian Agency (a part of the Martinez Historic District), and Valerie Jean Date Garden (Exhibit 5-6). No California Historical Landmarks are located within or adjacent to the planning area.

Properties included in any of these registers are eligible for a number of state historic preservation incentives, such as property tax reduction, benefits provided by the California Heritage Fund, alternative building regulations under the State Historic Building Code, special historic preservation bond measures, and seismic retrofit tax credits.

Programs Currently Administered by the City

In 1991, The City of La Quinta enacted its Historic Preservation Ordinance. The ordinance was amended in 1993, establishing an independent Historic Preservation Commission, whose responsibility is "to act in an advisory capacity to the city council and planning commission in all matters relating to the identification, protection, retention, and preservation of historic areas and sites within the city."

Also established through the amended ordinance are a local historical resources inventory and procedures for the designation of landmarks and historic districts, all of which are maintained and/or administered by the Historic Preservation Commission. At present, the historical resources inventory has been established, and includes all of the properties listed in Appendix 2 that are within La Quinta's city boundaries. The landmark program, however, has not yet been implemented.

In 1995, the City of La Quinta became a Certified Local Government. The city's Historic Preservation Plan was prepared by city staff in 1996. Between 1996 and 1997, the city completed the first city-wide historical resources survey. Most recently, the city has adopted official guidelines regarding the qualification requirements for archaeological consultants. At the present time, the city has

programs to implement the transfer of development rights and the application of the State Historic Building Code, but does not have a program of direct subsidies or tax incentives for historic preservation. Nor has the city established the mechanisms to incorporate historic preservation concerns into its zoning ordinance. As growth in the City accelerates, the City's cultural and historic resources continue to be at risk. Continued and expanded programs to protect these resources are necessary to assure long term preservation.

Archaeological Research Designs

For the La Quinta area, the unique archaeological circumstance is that the shorelines of successive high stands of ancient Lake Cahuilla lie within the City boundaries, leaving a remarkably dense accumulation of archaeological sites in a concentrated area. As the City of La Quinta continues on its course of requiring archaeological studies prior to land development, real progress is being made at understanding prehistoric lifeways based on the archaeological record. For studies to have the most benefit, they need to be guided by research designs that are specific to the locale in question.

A research design is intended to guide archaeological explorations, directing investigators to focus on those questions that have the best potential to fill in gaps in current knowledge and theory. Archaeologists plan their field and laboratory strategies to collect scientific data that can paint a picture of past lifeways, focusing especially on those questions that are the subject of ongoing debate, trying to advance the field by building on previous work, by supporting or refuting current understandings, and by asking questions that lead in new directions, thus laying the groundwork for future studies.

In archaeological investigations in general, there is a set of research questions that can be asked of almost any excavation project, but the specifics of each case require refinement and focus. The standard set of questions includes: (1) chronology, the age and duration of site occupation; (2) subsistence, the daily diet and range of natural resources that were

hunted, collected, and consumed; (3) settlement patterns, the nature of site occupation, be it temporary or permanent, large scale or small; (4) trade or external contacts, the evidence for materials exchange with outside groups based on the presence or absence of exotic items in the archaeological record; and (5) ethnicity or culture, the tribal or linguistic affiliation of the people who occupied the land at the time. These five general questions, which are common to site investigation everywhere, generate more specific inquiries and focused lines of research when applied to the northern shoreline of ancient Lake Cahuilla. What are the specific ages of the high lake stands and how many were there? What part of the Native American diet depended on lacustrine resources? Did the Indians live in the area only when the lake was high, or did they live here also when the lake was down? What were the effects on trade when high lake stands blocked access to certain resource areas, specifically obsidian butte and the wonderstone quarry? What about clay sources? Were the inhabitants of lakeshore sites the ancestors of today's Cahuilla population and if so, were their ties closer to the mountains, the desert, or the pass?

Each archaeologist or team of archaeologists must derive its own research questions, and these will change as knowledge grows and methods improve. However, archaeological research in the City must be guided by such questions, and the interpretation of the past should advance and grow as a result of City-mandated studies.

FUTURE DIRECTIONS

Based on its existing historic preservation programs and the potential presented by as yet untapped preservation tools, the City of La Quinta has formulated goals, policies, and implementation programs that will continue to improve the community's efforts to preserve its past.

GOAL 1

The identification and inventory of all cultural resources within the city and its planning area.

Policy 1.1

The city shall adopt the necessary means to identify properties of historical significance within its jurisdiction.

Program 1.1.1: Maintain and expand as necessary the existing historical resources inventory to provide a comprehensive and up-to-date register of known cultural resources.

Program 1.1.2: Maintain and update at regular intervals the 1996-1997 historical resources survey to reflect current status of cultural resources and potential cultural resources, and to include non-traditional property types.

Program 1.1.3: Establish guidelines and procedures to implement the landmark and district program outlined in the Historic Preservation Ordinance.

Program 1.1.4: Develop a long-term strategy to promote cultural resources survey coverage of presently unsurveyed portions of the planning area, especially areas of higher levels of sensitivity for cultural resources.

Program 1.1.5: Encourage the nomination of qualified properties to the city's inventory system and/or any federal or state registers.

Policy 1.2

The city shall consider the identification of cultural resources as an integral part of the planning process.

Program 1.2.1: Establish and maintain channels of routine consultation with the Eastern Information Center at the University of California, Riverside, the Torres-Martinez, Augustine, and Cabazon Bands of Cahuilla Indians, the La Quinta Historical Society, the Coachella Valley Historical Society, and the Coachella Valley Archaeological Society.

Program 1.2.2: Prepare and maintain a comprehensive computerized database of known cultural resources, including geographic information in the form of digitized maps, to facilitate easy reference in the planning process.

GOAL 2

The preservation, maintenance, rehabilitation, and/or restoration of cultural resources under City control, and prevention of unnecessary destruction of or adverse effects to such resources through city-sponsored or assisted projects and programs.

Policy 2.1

The city shall make all reasonable efforts to protect cultural resources under its control.

Program 2.1.1: Adopt a proactive approach to historic preservation in all city-sponsored or assisted projects and programs to ensure the proper protection of cultural resources.

Program 2.1.2: Adopt the Secretary of the Interior's standards and guidelines for the preservation, rehabilitation, or restoration of historic buildings and structures under the city's control, and in all city-sponsored or assisted projects and programs that may have impacts on cultural resources.

Program 2.1.3: Seek federal and state funding for historic preservation projects from all available sources, including those provided under the Community Development Block Grant Program, the Transportation Equity Act, the California Heritage Fund, and various programs sponsored by the National Trust for Historic Preservation.

Program 2.1.4: Explore the feasibility of establishing a historic preservation revolving fund, to be financed by tax increments, and other appropriate sources, for the acquisition, relocation, renovation, rehabilitation, restoration, or reconstruction of cultural resources.

Policy 2.2

The city shall seek to increase its control and influence, when necessary, over cultural resources within its jurisdiction.

Program 2.2.1: Establish statutes, guidelines, and procedures to enable the city to acquire, by eminent domain if necessary, cultural resources when all other means to bring about the preservation of such resources have been exhausted.

Program 2.2.2: Explore the feasibility of bond issues to fund the acquisition, relocation, renovation, rehabilitation, restoration or reconstruction of cultural resources, as authorized by the Marks Act.

Program 2.2.3: Explore the prospect of a standing Memorandum of Agreement with OHP that enables the city to exercise increased local control over the decision-making process on cultural resources issues arising from NHPA Section 106 compliance.

GOAL 3

A system of incentives and regulations that will encourage the preservation, maintenance, rehabilitation, and/or restoration of cultural resources and prevent the unnecessary destruction of or adverse effects to such resources by private development projects.

Policy 3.1

The city shall support incentives, assistance, and opportunities for historic preservation available through federal, state, or city programs.

Program 3.1.1: Develop the necessary procedures to implement property tax reduction for owners of cultural resources who enter into contracts to preserve such resources, as provided by the Mills Act.

Program 3.1.2: Encourage and assist owners of qualified historic buildings to take advantage of income tax credit provided in the 1986 Tax Reform Act.

Program 3.1.3: Continue to implement the existing transfer of development rights/density bonus program.

Program 3.1.4: Continue to implement the application of the State Historic Building Code.

Program 3.1.5: Waive or reduce permit fees for qualified historic preservation projects.

Program 3.1.6: Amend the city's Zoning Ordinance to reflect historic preservation regulations and incentives.

Program 3.1.7: Modify development standards, including parking, setback, landscaping, and road/driveway width to accommodate the preservation of historic buildings and districts.

Program 3.1.8: Promote the use of seismic retrofit tax credits, and assist citizens to take advantage of the credits before the expiration of Revenue and Taxation Code §74.5 in July, 2000.

Program 3.1.9: Develop materials to inform interested parties of potential benefits provided by the California Heritage Fund and the National Trust for Historic Preservation, such as the National Preservation Loan Fund, the Inner-City Ventures Fund, the Preservation Services Fund, and the Johanna Favrot Fund.

Policy 3.2

The city shall use its regulatory power to ensure the proper protection of cultural resources and avoid or minimize adverse effects on such resources from private projects that require discretionary city actions.

Program 3.2.1: Require all proposed project sites to be surveyed by a qualified archaeologist, historian, and/or architectural historian, as appropriate, to identify any potential cultural resources that may be affected, unless the preponderance of the evidence demonstrates that such survey is unnecessary.

Program 3.2.2: Maintain and enforce the city's archaeological consultants qualification guidelines to ensure the consistent application of professional standards.

Program 3.2.3: Adopt procedures to prevent the demolition of historic buildings and structures without proper review, including existing conditions evaluation and rehabilitation analysis.

Program 3.2.4: Establish polices and procedures in code enforcement to prevent deterioration of historic buildings, structures, and districts.

Program 3.2.5: Amend the zoning ordinance to create, as appropriate, historic zoning districts and/or historic overlay districts in the city.

Program 3.2.6: Establish interdepartmental review procedures to ensure the uniform implementation of historic preservation policies in the city's decision-making process.

GOAL 4

The integration of cultural resource preservation into the City's economic development strategy.

Policy 4.1

The city shall use its historic preservation programs to stimulate community revitalization and redevelopment, job creation, and investment in the community.

Program 4.1.1: Apply incentives to encourage compatible development and redevelopment projects in existing residential neighborhoods and commercial districts without sacrificing the integrity of cultural resources.

Program 4.1.2: Develop and distribute materials promoting historic preservation as a means to stabilize and enhance property values in the city.

Policy 4.2

The city shall use its historic preservation programs to promote tourism in the city, and thereby support and stimulate its business and industry.

Program 4.2.1: Publicize the cultural heritage of the city, and promote appropriate cultural resources as tourist destinations.

Program 4.2.2: Explore a cooperative partnership with the County of Riverside Economic Development Agency in the agency's heritage tourism program.

Program 4.2.3: Promote and protect popular film locations in the city, and develop new ones in consultation with the Riverside County Film Commission and representatives of the film industry.

GOAL 5

Increased public awareness of the City's heritage.

Policy 5.1

The city shall sponsor, and encourage others to sponsor, public education programs and other activities to disseminate information about La Quinta's history and its cultural heritage.

Program 5.1.1: Establish a voluntary historic marker program for cultural resources of distinguished significance or high visibility.

Program 5.1.2: Explore the prospect of city-sponsored or cosponsored publications to publicize La Quinta's history and its cultural resources.

Program 5.1.3: Improve availability of information on historic buildings, structures, districts, and objects to the general public, except in cases where it can be demonstrated that increased public access will compromise the integrity of these resources.

Program 5.1.4: Encourage the local school districts to develop local history curricula in public schools.

Program 5.1.5: Promote the use of historic districts and appropriate cultural resources for the education, and enjoyment of the public, including the development of walking, driving, or bicycling tours.

Program 5.1.6: In cooperation with the La Quinta Historical Society, the Coachella Valley Historical Society, the Coachella Valley Archaeological Society, and the Torres-Martinez, Augustine, and Cabazon Bands of Cahuilla Indians, investigate the creation of a city museum facility, to include curatorial protocol for a cultural resources repository, potentially as a part of the Civic Center.

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- 1959 Map: Palm Desert, Calif. (15', 1:62,500); aerial photographs taken in 1954, field-checked in 1957 and 1959.

Appendix 1. Known Archaeological Sites within or near the Planning Area*	
Site Number	Description
CA-RIV-5	Ceramic scatter
CA-RIV-6	Ceramic scatter
CA-RIV-7	Architectural feature; cairn/rock feature
CA-RIV-9	Lithic scatter; ceramic scatter; other (shell beads and pendants)
CA-RIV-10	Ceramic scatter; architectural feature
CA-RIV-37	Ceramic scatter; petroglyph
CA-RIV-63	Lithic scatter; ceramic scatter
CA-RIV-64	Bedrock milling feature; ceramic scatter; hearth/pit
CA-RIV-119	Ceramic scatter; hearth/pit
CA-RIV-142	? (Record missing)
CA-RIV-148	Lithic scatter; ceramic scatter; habitation debris; other (shell beads and pendants)
CA-RIV-151	Lithic scatter; ceramic scatter
CA-RIV-158	Ceramic scatter
CA-RIV-193	Ceramic scatter; petroglyph
CA-RIV-208	Ceramic scatter
CA-RIV-273	Ceramic scatter; hearth/pit; habitation debris; other (cremations)
CA-RIV-296	Lithic scatter; ceramic scatter; hearth/pit; other
CA-RIV-368	Ceramic scatter
CA-RIV-369	Village site; trail; house rings; fire pits; ceramics; groundstone; cremations
CA-RIV-439	Ceramic scatter; bedrock milling feature; habitation debris
CA-RIV-440	Ceramic scatter; cairn/rock feature
CA-RIV-446	Ceramic scatter
CA-RIV-447	Ceramic scatter; trail/linear earthworks
CA-RIV-448	Lithic scatter; ceramic scatter; habitation debris; cairn?
CA-RIV-449	Lithic scatter; ceramic scatter; cairn/rock feature; trail/linear earthworks
CA-RIV-562	Ceramic scatter; bedrock milling feature; habitation debris
CA-RIV-563	Ceramic scatter; trail/linear earthworks
CA-RIV-564	Bedrock milling feature
CA-RIV-567	Ceramic scatter
CA-RIV-626	Lithic scatter; ceramic scatter; cairn/rock feature
CA-RIV-627	Cairn/rock feature
CA-RIV-764	Ceramic scatter; habitation debris
CA-RIV-795	Ceramic scatter
CA-RIV-809	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-848	Ceramic scatter; trail/linear earthworks
CA-RIV-849	Ceramic scatter
CA-RIV-859	Cabazon's village; habitation debris; (partially) destroyed
CA-RIV-1045	Cremation; ceramic scatter; groundstone; fire-affected rocks
CA-RIV-1046	Lithic scatter; ceramic scatter
CA-RIV-1171	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-1174	Lithic scatter; hearth/pit; habitation debris
CA-RIV-1176	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-1177	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-1178	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-1179	Ceramic scatter; hearth/pit; habitation debris; other (cremations)
CA-RIV-1180	Lithic scatter; ceramic scatter; house pit?; hearth/pit; habitation debris
CA-RIV-1181	Ceramic scatter; hearth/pit; habitation debris

* Information on the exact location of these archaeological resources is kept confidential for their protection.

Appendix 1. Known Archaeological Sites within or near the Planning Area (Continued)	
Site Number	Description
CA-RIV-1182	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-1292/H	Lithic scatter; ceramic scatter; historic buildings
CA-RIV-1303	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-1327/H	Ceramic scatter; habitation debris; foundation; trash scatter
CA-RIV-1331	Lithic scatter; ceramic scatter; bedrock milling feature; cairn; trail; rock shelter
CA-RIV-1332	Rock shelters; caches
CA-RIV-1334	Ceramic scatter
CA-RIV-1337	Ceramic scatter; cremation
CA-RIV-1338	Village site; rock scatter; ceramic scatter; fire-affected rocks
CA-RIV-1339	Habitation debris; ceramic scatter; lithic scatter; hearth/fire pits
CA-RIV-1340	Ceramic scatter; lithic scatter; groundstone
CA-RIV-1342	Ceramic scatter
CA-RIV-1344	Habitation debris; ceramic scatter; lithic scatter; fire-affected rocks; coprolites
CA-RIV-1346	Ceramic scatter
CA-RIV-1347	Ceramic scatter; hearth/pit?
CA-RIV-1348	Ceramic scatter
CA-RIV-1349	Lithic scatter; ceramic scatter
CA-RIV-1350	Ceramic scatter; bedrock milling feature; house pit; rock shelter
CA-RIV-1351	Ceramic scatter; lithic scatter; rock feature
CA-RIV-1367	Ceramic scatter; house pit
CA-RIV-1434	Ceramic scatter; bedrock milling feature; cairn/rock feature
CA-RIV-1435H	Water conveyance system
CA-RIV-1530	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-1603	Cairn/rock feature; hearth/pit
CA-RIV-1634	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-1637	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-1638	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-1715	Ceramic scatter
CA-RIV-1716	Ceramic scatter
CA-RIV-1717	Ceramic scatter
CA-RIV-1718	Lithic scatter; ceramic scatter
CA-RIV-1756	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-1757	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-1758	Lithic scatter; ceramic scatter
CA-RIV-1759	Ceramic scatter; hearth/pit; habitation debris
CA-RIV-1760	Ceramic scatter
CA-RIV-1761	Lithic scatter; ceramic scatter; hearth/pit; other (shell beads)
CA-RIV-1762	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-1763H	Walls/gates/fences; graves/cemetery; trash scatter; ceramic scatter
CA-RIV-1764H	Adobe building/structure; standing structure (pump house); trash scatter/dump
CA-RIV-1766	Lithic scatter; ceramic scatter; house pit; hearth/pit; habitation debris
CA-RIV-1767	Lithic scatter; ceramic scatter; hearth/pit
CA-RIV-1768	Lithic scatter; ceramic scatter; hearth/pit
CA-RIV-1769	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-1779	Ceramic scatter
CA-RIV-1838	Lithic scatter; ceramic scatter; hearth/pit
CA-RIV-1970	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-1972	Lithic scatter; ceramic scatter; hearth/pit; habitation debris

Appendix 1. Known Archaeological Sites within or near the Planning Area (Continued)	
Site Number	Description
CA-RIV-1973	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-1974	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-1980	Ceramic scatter; other (cremations)
CA-RIV-1981	Ceramic scatter
CA-RIV-1982	Ceramic scatter
CA-RIV-1983	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-2010	Cairn/rock feature; trail/lineal feature
CA-RIV-2011	Cairn/rock feature
CA-RIV-2012	Ceramic scatter
CA-RIV-2082/H	Ceramic scatter; trash scatter
CA-RIV-2083	Lithic scatter; ceramic scatter; other (groundstone)
CA-RIV-2084	Ceramic scatter; other (cremations, fired clay)
CA-RIV-2085	Ceramic scatter; habitation debris; other (fired clay)
CA-RIV-2195	Ceramic scatter; hearth/pit
CA-RIV-2196	Ceramic scatter; hearth/pit; habitation debris
CA-RIV-2197	Ceramic scatter; hearth/pit
CA-RIV-2198	Lithic scatter; ceramic scatter; hearth/pit
CA-RIV-2199	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-2200/H	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-2246H	Foundation; trash scatter; road/trail
CA-RIV-2250	Ceramic scatter
CA-RIV-2251/H	Ceramic scatter
CA-RIV-2822	Bedrock milling feature
CA-RIV-2823	Cairn/rock feature
CA-RIV-2824	Cairn/rock feature
CA-RIV-2825	Bedrock milling feature
CA-RIV-2826	Bedrock milling feature
CA-RIV-2827	Ceramic scatter; bedrock milling feature; hearth/pit; habitation debris
CA-RIV-2828	Bedrock milling feature
CA-RIV-2842	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-2936	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-2937	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-2974	Lithic scatter; ceramic scatter; hearth/pits
CA-RIV-2975	Ceramic scatter; habitation debris
CA-RIV-2976	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-2997	Ceramic scatter
CA-RIV-2998	Lithic scatter; ceramic scatter
CA-RIV-3000	Ceramic scatter
CA-RIV-3001	Ceramic scatter
CA-RIV-3004	Ceramic scatter
CA-RIV-3005	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-3007	Ceramic scatter; other (cremation)
CA-RIV-3008	Ceramic scatter
CA-RIV-3013	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-3027	Ceramic scatter; hearth/pit
CA-RIV-3131	Lithic scatter; ceramic scatter
CA-RIV-3143	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-3144	Ceramic scatter; hearth/pit; other (cremation)

Appendix 1. Known Archaeological Sites within or near the Planning Area (Continued)	
Site Number	Description
CA-RIV-3209/H	Ceramic scatter; other (cremations); grave/cemetery
CA-RIV-3222	House pit; hearth/pit
CA-RIV-3321	Ceramic scatter; hearth/pit
CA-RIV-3322	Ceramic scatter; hearth/pit; habitation debris
CA-RIV-3438H	Southern Pacific railroad station foundation remains; trash
CA-RIV-3659	Habitation debris; lithic scatter; ceramic scatter; fire-affected rock; bone
CA-RIV-3667	Ceramic scatter
CA-RIV-3668	Ceramic scatter
CA-RIV-3669T	Trail/linear feature
CA-RIV-3676	Bedrock milling feature
CA-RIV-3679	Bedrock milling feature
CA-RIV-3678	Bedrock milling feature
CA-RIV-3679/H	Lithic scatter; ceramic scatter; habitation debris; trash scatter
CA-RIV-3680	Ceramic scatter; hearth/pit
CA-RIV-3681	Ceramic scatter; hearth/pit
CA-RIV-3682	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-3683	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-3795	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-3866	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-3867	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-3868	Lithic scatter; ceramic scatter
CA-RIV-3872	Bedrock milling feature
CA-RIV-3873	Bedrock milling feature
CA-RIV-3874	Ceramic scatter
CA-RIV-3875	Ceramic scatter
CA-RIV-3876	Ceramic scatter; lithic scatter
CA-RIV-3877	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-3878	Ceramic scatter; bedrock milling feature; hearth/pit; habitation debris
CA-RIV-3879	Bedrock milling feature
CA-RIV-3880	Lithic scatter; ceramic scatter; cairn/rock feature; habitation debris
CA-RIV-3881	Lithic scatter; ceramic scatter; hearth/pit
CA-RIV-3882	Ceramic scatter
CA-RIV-3943	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-3944	Ceramic scatter
CA-RIV-4070	Ceramic scatter; groundstone fragments; human bone
CA-RIV-4071	Ceramic scatter
CA-RIV-4076	Ceramic scatter
CA-RIV-4090	Ceramic scatter; hearth/pit
CA-RIV-4091	Other (reburied cremation remains)
CA-RIV-4099	Ceramic scatter; trail/linear earthworks
CA-RIV-4108	Ceramic scatter
CA-RIV-4113	Lithic scatter; ceramic scatter
CA-RIV-4114	Lithic scatter; ceramic scatter; hearth/pit
CA-RIV-4167	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-4168	Ceramic scatter; hearth/pit; habitation debris
CA-RIV-4169	Ceramic scatter; other (cremation)
CA-RIV-4214	Ceramic scatter
CA-RIV-4215	Ceramic scatter; hearth/pit

Appendix 1. Known Archaeological Sites within or near the Planning Area (Continued)	
Site Number	Description
CA-RIV-4285	Petroglyph
CA-RIV-4489	Ceramic scatter
CA-RIV-4492	Petroglyph
CA-RIV-4493	Ceramic scatter; bedrock milling feature?; trail/linear earthworks
CA-RIV-4745	Ceramic scatter
CA-RIV-4746	Lithic scatter; ceramic scatter; hearth/pit
CA-RIV-4747H	Foundation; trash scatter
CA-RIV-4748H	Water conveyance system; wall/fence
CA-RIV-4749H	Foundation; trash scatter; water conveyance system; wall/fence
CA-RIV-4750/H	Ceramic scatter; trash scatter
CA-RIV-4751/H	Ceramic scatter; hearth/pit; trash scatter; water conveyance system
CA-RIV-4752	Ceramic scatter
CA-RIV-4752	Ceramic scatter
CA-RIV-4754	Ceramic scatter; hearth/pit
CA-RIV-4755H	Road/trail
CA-RIV-4756H	Water conveyance system; wall/fence
CA-RIV-4757H	Foundation; trash scatter; water conveyance system
CA-RIV-4808H	Trash scatter
CA-RIV-4809H	Foundation; trash scatter
CA-RIV-5134	Ceramic scatter
CA-RIV-5136	Habitation debris; ceramic scatter; lithic scatter; points; beads; bone; FAR
CA-RIV-5137	Ceramic scatter
CA-RIV-5138[H]	Trash scatter
CA-RIV-5139	Cremation; beads; ceramic scatter
CA-RIV-5140	Habitation debris; ceramic scatter; groundstone fragments; bone; charcoal
CA-RIV-5143	Ceramic scatter
CA-RIV-5144	Ceramic scatter; bone; FAR
CA-RIV-5152	Ceramic scatter
CA-RIV-5153H	Trash scatter
CA-RIV-5158	Ceramic scatter
CA-RIV-5211	Ceramic scatter; hearth/pit; habitation debris
CA-RIV-5212	Ceramic scatter; hearth/pit
CA-RIV-5213	Ceramic scatter
CA-RIV-5214	Ceramic scatter
CA-RIV-5232	Lithic scatter; ceramic scatter; hearth/pit; habitation debris; other (cremation?)
CA-RIV-5233	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-5319	Ceramic scatter
CA-RIV-5320	Ceramic scatter
CA-RIV-5321	Cairn/rock feature; hearth/pit?
CA-RIV-5322	Bedrock milling feature; rock shelter?
CA-RIV-5323	Bedrock milling feature
CA-RIV-5324	Bedrock milling feature
CA-RIV-5330	Ceramic scatter
CA-RIV-5331	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-5332	Lithic scatter; ceramic scatter
CA-RIV-5333	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-5334	Lithic scatter; ceramic scatter
CA-RIV-5335	Lithic scatter; ceramic scatter

Appendix 1. Known Archaeological Sites within or near the Planning Area (Continued)	
Site Number	Description
CA-RIV-5336H	Trash scatter
CA-RIV-5337	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-5338	Lithic scatter; ceramic scatter
CA-RIV-5339	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-5340	Ceramic scatter; hearth/pit; habitation debris
CA-RIV-5341	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-5342	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-5343	Lithic scatter; ceramic scatter; hearth/pit
CA-RIV-5344	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-5345	Lithic scatter; hearth/pit
CA-RIV-5346	Ceramic scatter; hearth/pit; habitation debris
CA-RIV-5347	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-5348	Ceramic scatter
CA-RIV-5349	Ceramic scatter
CA-RIV-5350	Ceramic scatter; hearth/pit
CA-RIV-5351	Lithic scatter; ceramic scatter; hearth/pit
CA-RIV-5352	Hearth/pit; habitation debris
CA-RIV-5353	Lithic scatter; ceramic scatter
CA-RIV-5354H	Landscaping; trash scatter; water conveyance system
CA-RIV-5496	Cairn/rock feature; trail/linear earthworks
CA-RIV-5509H	Trash/dump scatter
CA-RIV-5510/H	Trash/dump scatter; lithic scatter; ceramic scatter
CA-RIV-5511H	Reservoir; foundation; well; trash/dump scatter
CA-RIV-5512	Bedrock milling feature
CA-RIV-5525	Cairn/rock feature
CA-RIV-5756	Lithic scatter; ceramic scatter; hearth/pit
CA-RIV-5764	Lithic scatter; ceramic scatter; hearth/pit
CA-RIV-5765	Lithic scatter; ceramic scatter; hearth/pit
CA-RIV-5766	Ceramic scatter
CA-RIV-5767	Hearth/pit
CA-RIV-5768	Lithic scatter; ceramic scatter; hearth/pit
CA-RIV-5769	Ceramic scatter; hearth/pit
CA-RIV-5770	Ceramic scatter; hearth/pit
CA-RIV-5771	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-5772H	Trash scatter
CA-RIV-5773	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-5774	Ceramic scatter; hearth/pit; habitation debris
CA-RIV-5775	Ceramic scatter; hearth/pit
CA-RIV-5777	Ceramic scatter
CA-RIV-5778	Ceramic scatter
CA-RIV-5779	Lithic scatter; ceramic scatter; hearth/pit
CA-RIV-5780	Lithic scatter; ceramic scatter; hearth/pit
CA-RIV-5799	Ceramic scatter; hearth/pit; habitation debris
CA-RIV-5801	Cairn/rock feature
CA-RIV-5828	Ceramic scatter; hearth/pit
CA-RIV-5832	Lithic scatter; habitation debris; other (cremation)
CA-RIV-5838	Ceramic scatter; other (cremation)
CA-RIV-5839H	Trash scatter; well/cistern

Appendix 1. Known Archaeological Sites within or near the Planning Area (Continued)	
Site Number	Description
CA-RIV-5840	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-5841	Ceramic scatter; hearth/pit
CA-RIV-5842	Ceramic scatter; hearth/pit; habitation debris
CA-RIV-5843	Ceramic scatter
CA-RIV-5844	Ceramic scatter
CA-RIV-5863	Habitation debris; ceramic scatter; lithic scatter; groundstone; FAR
CA-RIV-5864	Habitation debris; ceramic scatter; beads; groundstone; FAR
CA-RIV-5865	Habitation debris; ceramic scatter; lithic; groundstone; bone; FAR
CA-RIV-5876	Lithic scatter; ceramic scatter; hearth/pit
CA-RIV-5972	?
CA-RIV-5973H	Trash scatter
CA-RIV-5974H	Trash scatter
CA-RIV-5977	Ceramic scatter
CA-RIV-6059	Ceramic scatter; hearth/pit; habitation debris
CA-RIV-6060	Ceramic scatter; hearth/pit
CA-RIV-6063H	Trash/dump scatter
CA-RIV-6064H	Trash/dump scatter
CA-RIV-6074	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-6075	Ceramic scatter; habitation debris
CA-RIV-6087	Lithic scatter; ceramic scatter; other (groundstone)
CA-RIV-6088	Ceramic scatter
CA-RIV-6089	Ceramic scatter; other (groundstone)
CA-RIV-6090	Ceramic scatter
CA-RIV-6092	Ceramic scatter; habitation debris
CA-RIV-6095[H]	Historic bone refuse pit
CA-RIV-6098	Ceramic scatter
CA-RIV-6099	Ceramic scatter
CA-RIV-6100	Hearth/pits
CA-RIV-6101	Ceramic scatter
CA-RIV-6102	Ceramic scatter
CA-RIV-6103H	Foundations/structure pads; water conveyance system
CA-RIV-6104	Ceramic scatter
CA-RIV-6105	Lithic scatter; ceramic scatter
CA-RIV-6106	Lithic scatter; ceramic scatter
CA-RIV-6107/H	Lithic scatter; ceramic scatter; trash/dump scatter
CA-RIV-6108	Ceramic scatter
CA-RIV-6109	Lithic scatter; ceramic scatter
CA-RIV-6110	Lithic scatter; ceramic scatter
CA-RIV-6111/H	Ceramic scatter; trash/dump scatter
CA-RIV-6112/H	Ceramic scatter; trash/dump scatter
CA-RIV-6113	Ceramic scatter
CA-RIV-6114	Lithic scatter; ceramic scatter
CA-RIV-6115	Lithic scatter; ceramic scatter
CA-RIV-6116	Ceramic scatter
CA-RIV-6117	Lithic scatter; ceramic scatter
CA-RIV-6118/H	Lithic scatter; ceramic scatter; trash/dump scatter
CA-RIV-6119	Ceramic scatter
CA-RIV-6120	Ceramic scatter

Appendix 1. Known Archaeological Sites within or near the Planning Area (Continued)	
Site Number	Description
CA-RIV-6120	Ceramic scatter
CA-RIV-6122H	Adobe building/structure; foundations; wells/cisterns; trash/dump scatter
CA-RIV-6132	Lithic scatter; ceramic scatter
CA-RIV-6134	Lithic scatter; ceramic scatter; hearth/pit
CA-RIV-6135	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-6136	Ceramic scatter
CA-RIV-6137	Lithic scatter; ceramic scatter
CA-RIV-6138	Ceramic scatter; other (fired-clay)
CA-RIV-6139	Ceramic scatter
CA-RIV-6140	Ceramic scatter; hearth/pit; other (fired-clay)
CA-RIV-6141	Ceramic scatter; other (fired-clay)
CA-RIV-6142	Ceramic scatter; other (fired-clay)
CA-RIV-6143	Ceramic scatter
CA-RIV-6144	Lithic scatter; ceramic scatter; habitation debris; other (fired-clay)
CA-RIV-6145	Ceramic scatter; hearth/pit
CA-RIV-6146	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-6147	Lithic scatter; ceramic scatter; hearth/pit; habitation debris; other (fired-clay)
CA-RIV-6148	Lithic scatter; ceramic scatter; hearth/pit; habitation debris; other (fired-clay)
CA-RIV-6149	Lithic scatter; ceramic scatter; hearth/pit; other (fired-clay)
CA-RIV-6150	Ceramic scatter; hearth/pit; habitation debris; other (fired-clay)
CA-RIV-6151	Ceramic scatter; hearth/pit; other (fired-clay)
CA-RIV-6177	Bedrock milling feature
CA-RIV-6178	Bedrock milling feature
CA-RIV-6179H	Trash/dump scatter
CA-RIV-6180H	Trash/dump scatter
CA-RIV-6181H	Trash/dump scatter
CA-RIV-6182H	Trash/dump scatter
CA-RIV-6190	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-6214	Ceramic scatter; hearth/pit; habitation debris
CA-RIV-6215	Ceramic scatter; bedrock milling feature
CA-RIV-6216	Ceramic scatter; habitation debris
CA-RIV-6217	Ceramic scatter; habitation debris
CA-RIV-6218	Ceramic scatter; habitation debris
CA-RIV-6219	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-6220	Ceramic scatter; hearth/pit; habitation debris
CA-RIV-6221	Ceramic scatter; burial; habitation debris
CA-RIV-6222	Ceramic scatter; habitation debris
CA-RIV-6223	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-6224	Ceramic scatter; habitation debris
CA-RIV-6225	Ceramic scatter; habitation debris
CA-RIV-6226	Ceramic scatter; habitation debris
CA-RIV-6227	Ceramic scatter; habitation debris
CA-RIV-6228	Ceramic scatter; habitation debris
CA-RIV-6229	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-6230	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-6231	Ceramic scatter; habitation debris
CA-RIV-6234	Lithic scatter; ceramic scatter; hearth/pit; habitation debris
CA-RIV-6235	Ceramic scatter

Appendix 1. Known Archaeological Sites within or near the Planning Area (Continued)	
Site Number	Description
CA-RIV-6236	Ceramic scatter
CA-RIV-6241	Ceramic scatter
CA-RIV-6242	Lithic scatter; ceramic scatter
CA-RIV-6243/H	Structural remains; rock shelter; well
CA-RIV-6244	Bedrock milling feature
CA-RIV-6245	Ceramic scatter
CA-RIV-6275	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-6276	Ceramic scatter
CA-RIV-6277	Lithic scatter; ceramic scatter; habitation debris
CA-RIV-6352	Ceramic scatter
CA-RIV-6353	Lithic scatter; ceramic scatter; other (fired-clay; bone/shell)
CA-RIV-6354	Lithic scatter; ceramic scatter
CA-RIV-6355	Ceramic scatter
CA-RIV-6356	Ceramic scatter; other (fired-clay; bone/shell)
CA-RIV-6357	Ceramic scatter
CA-RIV-6381H	Historic railroad line
CA-RIV-7930	Ceramic scatter
33-8761	Trail

Appendix 2. Recorded Historical Resources within or near the Planning Area				
Property Number	Property Name	Location	Property Type	Year Built
?	Burkett Ranch	47-250 Washington	Single-family dwelling	Ca. 1917
33-5637	"Bud" Martin House	87-210 Center	Single-family dwelling	1915
33-5638	Thermal Hotel	87-213 Center	Educational; hotel/motel	1913
33-5639	John Kelly House	87-232 Center	Single-family dwelling	1935
33-5640	None	87-352 Center	Single-family dwelling	1905
33-5641	Dick Wood Home	87-191 Kokell	Single-family dwelling	1915
33-5642	None	87-311 Kokell	Multiple family property	1910
33-5643	Alderman House	56-324 Market	Single-family dwelling	1910
33-5644	Wool Ranch	84-281 Avenue 58	Farm/ranch	1906
33-5645	McPheeters Ranch	84-801 Avenue 58	Single-family dwelling	1917
33-5645	Triple AAA Water Co.	56-273 Highway 111	Industrial building	1915
33-5647	DeVore Ranch	84-800 Bagdad	Farm/ranch	1930
33-5650	Women's Club of Coachella Valley	51893 Harrison	Club house	1930
33-5667	Payne Dairy	55-526 Highway 86	Farm/ranch	1920
33-5683	Smith McCollum House	85-495 Avenue 61	Adobe building	1930
33-5684	Valerie Jean's Date Shop/ Russell Nicoll Home	66-021 Highway 86	Single-family dwelling; commercial building	1912-37
33-5685	Hagerty Ranch	58-491 Jackson	Single-family dwelling	1930
33-5686	Moravian Church/Indian School	Torres-Martinez Indian Reservation	Educational/religious building	1907
33-5687	Agent's Home	Torres-Martinez Ind. Res.	Government building	1907
33-5688	School Agency Office	Torres-Martinez Ind. Res.	Government building	1907
33-5689	None	Torres-Martinez Ind. Res.	Ancillary buildings	?

Appendix 2. Recorded Historical Resources within or near the Planning Area (Continued)				
Property Number	Property Name	Location	Property Type	Year Built
33-5690	Jean & Russel Force House	66-745 Martinez	Single-family dwelling	1947
33-5691	None	Torres-Martinez Ind. Res.	Ancillary building	1940
33-5692	Indian Catholic Church	Torres-Martinez Ind. Res.	Religious building	1894
33-5693	Indian Church Cemetery	Torres-Martinez Ind. Res.	Cemetery	1876
33-5694	Roy Harmon House	56-210 Palm	Single-family dwelling	1925
33-5695	Hollis Ranch	57-605 Van Buren	Farm/ranch	1940
33-5705	Coachella Canal		Canal/aqueduct	1948
33-6043	None	Harrison/Ave. 60	U.S. Army storage bldg.	1940s
33-7254	La Casita	51-733 Madero	Single-family dwelling	1937
33-7255	Real Estate Office	77-885 Montezuma	Commercial building	1936
33-7256	Town Center Grocery Store	77-895 Montezuma	Commercial building	1940s
33-7257	Desert Club	78-042 Avenue 52	Commercial building	1939
33-7258	La Quinta Hotel Complex	49-499 Eisenhower	Hotel/motel	1926-27
33-7259	None	51-662 Eisenhower	Single-family dwelling	1940
33-7260	Marcelene Carnes Home	52-217 Eisenhower	Single-family dwelling	1940
33-7261	None (adobe ruins)	Eisenhower/Washington	Adobe building/structure	1920s-30s
33-7262	Point Happy Ranch	46-135 Washington	Farm/ranch	1930s
33-7263	Point Happy Ranch	46-135 Washington	Ancillary building	1930s
33-7264	None	46-370 Cameo Palms	Single-family dwelling	1933
33-8063	None	78-887 Varner	Single-family dwelling	Ca. 1930s
33-8064	None	78-887 Varner	Single-family dwelling	Ca. 1930s
33-8065	None	78-887 Varner	Single-family dwelling	Ca. 1930s
33-8066	None	78-887 Varner	Single-family dwelling	1950s-60s
33-8067	None	78-887 Varner	Single-family dwelling	Ca. 1930s
33-8068	None	78-887 Varner	Single-family dwelling	1950s-70s
33-8069	None	78-887 Varner	Single-family dwelling	1950s-70s
33-8070	None	78-887 Varner	Single-family dwelling	Ca. 1930s
33-8071	None	78-887 Varner	Single-family dwelling	Ca. 1930s
33-8072	None	78-887 Varner	Single-family dwelling	Ca. 1930s
33-8073	None	78-887 Varner	Ancillary building	Ca. 1930s
33-8074	None	78-887 Varner	Ancillary building	1930s-40s
33-8129	Dianna Date Garden	56-850 Monroe	Farm/ranch	Ca. 1935
33-8302	Whittier Ranch/ Astor Ranch	NW corner 48th and Jackson	Single-family dwelling	Ca. 1925
Pending	Unknown	80-041 Avenue 50	Single-family dwelling	Ca. 1930s
Pending	Hacienda del Gato	Avenue 52	Single-family dwelling	1920s-40s
Pending	Unknown	51-787 Avarado	Single-family dwelling	1938
Pending	Unknown	52-301 Bermudas	Single-family dwelling	1937
Pending	Unknown	52-333 Bermudas	Single-family dwelling	1937
Pending	Unknown	52-375 Bermudas	Single-family dwelling	1937
Pending	Unknown	51-290 Carranza	Single-family dwelling	1937
Pending	Unknown	51-377 Carranza	Single-family dwelling	1937
Pending	Unknown	52-555 Carranza	Single-family dwelling	1941
Pending	Unknown	52-720 Carranza	Single-family dwelling	1947
Pending	Unknown	52-813 Carranza	Single-family dwelling	1937
Pending	Unknown	51-495 Diaz	Single-family dwelling	1938
Pending	Unknown	51-835 Diaz	Single-family dwelling	1937

Appendix 2. Recorded Historical Resources within or near the Planning Area (Continued)				
Property Number	Property Name	Location	Property Type	Year Built
Pending	Unknown	51-842 Diaz	Single-family dwelling	1936
Pending	Unknown	52-123 Diaz	Single-family dwelling	1936
Pending	Cyrus Pierce House	49-499 Eisenhower	Hotel/motel	Ca. 1929
Pending	La Casa	49-499 Eisenhower	Hotel/motel	1920s
Pending	Walter Morgan House	49-499 Eisenhower	Hotel/motel	1926-27
Pending	Unknown	51-001 Eisenhower	Single-family dwelling	1938
Pending	Unknown	52-155 Eisenhower	Single-family dwelling	1937
Pending	Unknown	52-862 Eisenhower	Single-family dwelling	1937
Pending	Hunts Date Garden	Eisenhower/Tampico	Farm/ranch	1904
Pending	Unknown	77-619 Ensenada	Single-family dwelling	1938
Pending	Unknown	78-023 Estado	Commercial building	Ca. 1930s
Pending	Unknown	78-035/78-039 Estado	Commercial building	Ca. 1936
Pending	Unknown	51-537 Herrera	Single-family dwelling	1937
Pending	Unknown	51-984 Herrera	Single-family dwelling	1938
Pending	Unknown	52-042 Herrera	Single-family dwelling	1937
Pending	Unknown	77-495 Hidalgo	Single-family dwelling	1937
Pending	Unknown	50-810 Jefferson	Single-family dwelling	Ca. 1920s
Pending	Date Palm Grove	Jefferson/Avenue 52	Farm/ranch	1926
Pending	Unknown	51-653 Juarez	Single-family dwelling	1948
Pending	Unknown	52-159 Juarez	Single-family dwelling	1936
Pending	Unknown	51-775 Madero	Single-family dwelling	1936
Pending	Unknown	51-802 Martinez	Single-family dwelling	1935
Pending	Unknown	52-217 Martinez	Single-family dwelling	1936
Pending	Unknown	52-835 Martinez	Multiple-family dwelling	1948
Pending	Unknown	52-416 Mendoza	Single-family dwelling	Ca. 1947
Pending	Unknown	52-444 Mendoza	Single-family dwelling	1948
Pending	Unknown	52-444 Mendoza	Single-family dwelling	1948
Pending	Unknown	52-486 Mendoza	Multiple-family dwelling	1936
Pending	Unknown	52-519 Mendoza	Single-family dwelling	1936
Pending	Unknown	52-835 Mendoza	Single-family dwelling	1948
Pending	Unknown	77-177 Montezuma	Single-family dwelling	1936
Pending	Unknown	51-991 Morales	Single-family dwelling	1936
Pending	Unknown	51-351 Navarro	Single-family dwelling	1935
Pending	Unknown	51-453 Navarro	Single-family dwelling	1948
Pending	Unknown	52-337 Navarro	Single-family dwelling	1940
Pending	Unknown	51-782 Obregon	Single-family dwelling	1936
Pending	Unknown	52-693 Obregon	Single-family dwelling	1939
Pending	Unknown	52-860 Obregon	Single-family dwelling	1947
Pending	Unknown	51-262 Ramirez	Single-family dwelling	1937
Pending	Unknown	51-333 Ramirez	Single-family dwelling	1937
Pending	Unknown	52-383 Ramirez	Single-family dwelling	1937
Pending	Unknown	51-215 Rubio	Single-family dwelling	1937
Pending	Unknown	52-057 Rubio	Single-family dwelling	1937
Pending	Unknown	54-391 Rubio	Single-family dwelling	1940
Pending	Unknown	54-415 Rubio	Single-family dwelling	1940
Pending	Unknown	51-095 Vallejo	Single-family dwelling	1936
Pending	Unknown	51-877 Vallejo	Single-family dwelling	1937

Appendix 2. Recorded Historical Resources within or near the Planning Area (Continued)				
Property Number	Property Name	Location	Property Type	Year Built
Pending	Unknown	51-407 Velasco	Single-family dwelling	1935
Pending	Unknown	53-102 Velasco	Single-family dwelling	1949
Pending	Unknown	51-411 Villa	Single-family dwelling	1937
Pending	Unknown	51-607 Villa	Single-family dwelling	1937
Pending	Unknown	52-031 Villa	Single-family dwelling	1936
Pending	Obelisk street signs		Urban design feature	1930
Pending	None	54-684 Highway 86	Single-family dwelling	1940s

APPENDIX C

La Quinta General Plan Update Biological Report

Prepared by

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June 21, 2001

Lawrence F. LaPré, PhD
June 21, 2001

Lawrence F. LaPré, PhD
June 21, 2001

The City of La Quinta is preparing a revision and update to its General Plan. All relevant information on the natural and built environment is considered in the General Plan, including biological resources within and surrounding the City, which form an important component of the quality of life in the Coachella Valley. Urbanization has led to the listing of some species as threatened or endangered by state and federal governments, and the General Plan must comply with laws and regulations affording protection to these species of plants and animals.

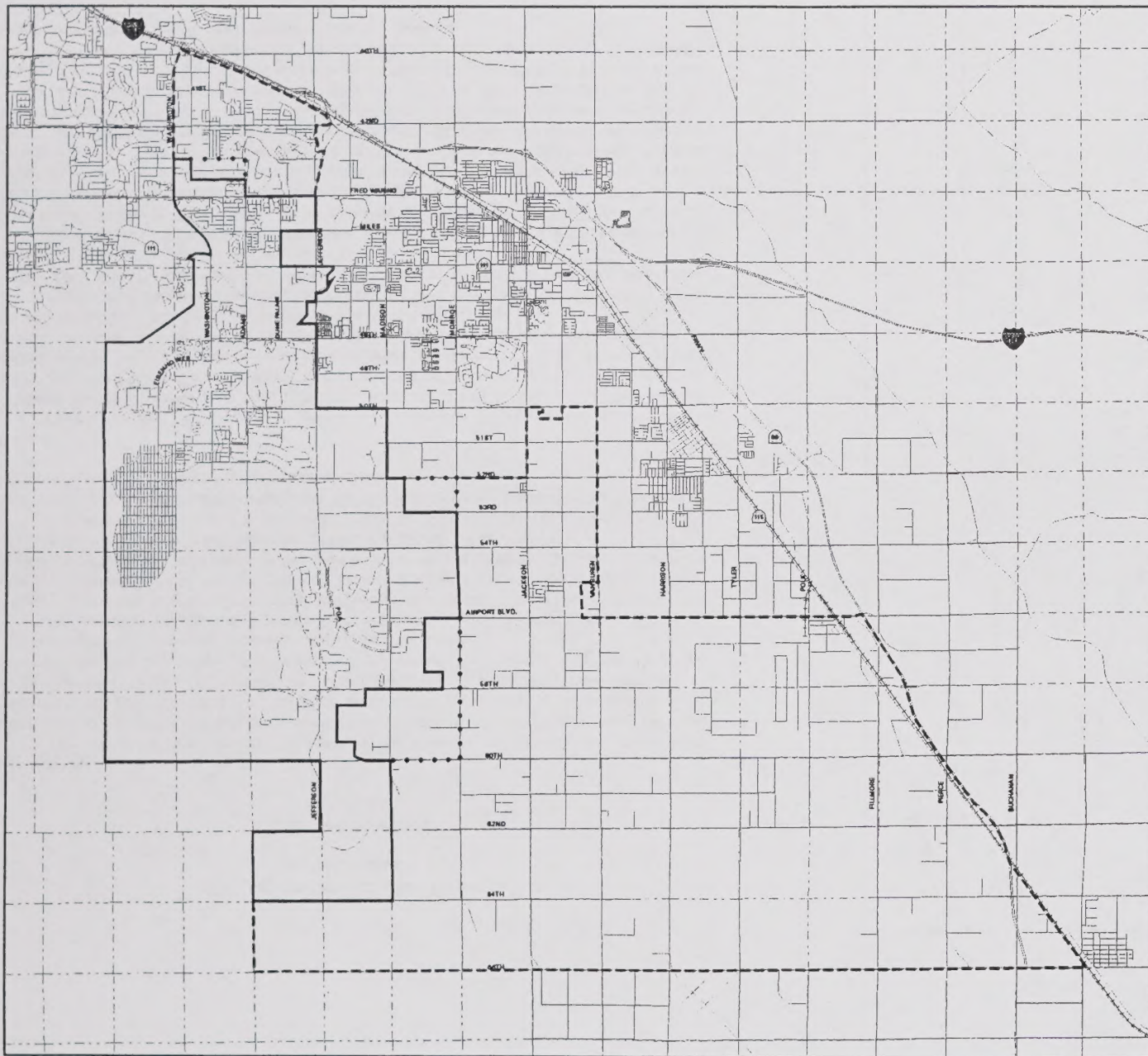
The purpose of this report is to describe significant biological resources present in the study area. These include viable habitats supporting the biodiversity of the Coachella Valley, as well as habitats of threatened, endangered, and declining species.

Prior to the site visit, a literature review was conducted. Sources consulted included the California Natural Diversity Data Base (CNDDB), botanical and wildlife references, the Coachella Valley fringe-toed lizard Habitat Conservation Plan, and biological surveys prepared for development projects within the study area. In addition, scientific references discussing the sand-adapted invertebrates were examined to determine if these insects and other arthropods might be present on the remnant mesquite hummocks and blow-sand deposits in the study area.

Field visits were made to the study area during four days in July and September 1999. These consisted of "windshield surveys" to determine the locations of undeveloped lands providing habitat for native species of the Coachella Valley.

Representatives of the Coachella Mountains Conservancy, Bureau of Land Management, and Terra Nova Planning & Research, Inc. were contacted for information on the Coachella Valley Multispecies Habitat Conservation Plan (MSHCP). Documents reviewed from the MSHCP included species accounts reviewing the life histories, distribution, and status of all proposed covered species, an Administrative Draft of the plan prepared in August, 2000, and a draft of the Adaptive Management and Monitoring Program dated December 2000. BLM provided the species models for all species considered in the MSHCP, consisting of maps of all known locations along with the modeled distribution of each species based on habitat characteristics. Other documents made available for review included the wildlife agency (Calif. Dept. of Fish and Game and U. S. Fish and Wildlife Service) review of the Administrative Draft plan and the Independent Science Advisors Review of the Administrative Draft plan and their response to specific questions.





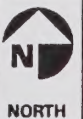
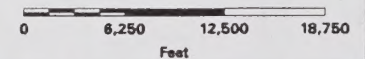
Map 2. General Plan Study Area

City of La Quinta General Plan

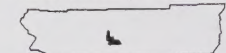
LEGEND

- Roads
- - - Township/Range Sections
- ++++ Railroads
- City Limits
- - - General Plan Planning Area
- City Sphere of Influence

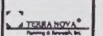
Scale
1:90,000



Riverside County Vicinity Map



Map Prepared on: July 10, 2000
Map Prepared by: Aerial Information Systems
Map Version No.: 5



Results

The study area lies at the west edge of the Colorado Desert subdivision of the Sonoran Desert, characterized by low elevations, an extremely hot and dry climate with occasional summer thunderstorms, and several rocky mountain ranges. The past history of channel wandering of the Colorado River has left a significant influence on today's biological resources. The former shoreline of Lake Cahuilla varied over the past 6,000 years from sea level to about 36' elevation (Tinkham, 1975; San Bernardino County Museum, 1996). It traverses the study area in an east-west direction. Plant communities diverge at this broad shoreline zone, reflecting the calcareous and alkaline nature of the soils.

The majority of the Coachella Valley contains typical Colorado Desert flora and fauna that is widespread in southeastern California. However, the central Coachella Valley near La Quinta harbors significant portions of two relatively unusual habitats. These are the sand dunes, sand sheets, and sand hummocks of the blowsand ecosystem and the mesquite hummocks and thickets found both in the sand and in the alkali soils below the elevation of the ancient Lake Cahuilla shoreline. Both of these habitats support species that have declined significantly as a result of urbanization of the valley. The remaining blowsand is home to several endemic species, which are plants and animals adapted to the specialized conditions whose range is restricted to the Coachella Valley. Two of the blowsand endemics are listed as threatened or endangered by the state and federal governments. Others are in jeopardy of becoming threatened or endangered if their numbers and remaining habitat continue to shrink. The mesquite hummocks do not support endemic species, but provide habitat for declining species that have suffered primarily from fragmentation of the habitat.

The study area also contains rocky hillsides of the Santa Rosa Mountains, which provides habitat for a different suite of plants and animals from those on the valley floor. Connectivity with the vast areas of wildlands in the Santa Rosa Mountains allows for the presence of wide-ranging animals, including bighorn sheep, as well as predators such as prairie falcon, golden eagle, bobcat and mountain lion.

Major drainages below the canyons of the Santa Rosa Mountains support smoke tree and palo verde washes, which are good habitats for a variety of wildlife. Few good representations of desert washes remain in the western and central Coachella Valley. The Bear Creek drainage above the cove in La Quinta is one of these.

Vegetation and flora

The study of plant communities and regional floras has progressed significantly since the last update of the La Quinta General Plan. All botanical associations in California have been re-examined and more precisely defined, based on transect studies of the dominant perennials. The result is the redefinition of plant communities as used by classical botanists into more specific "natural communities" (Holland 1986, Sawyer and Keeler-Wolf, 1995). Many plant associations in the Coachella Valley are based on soil type, particularly the classification of blowsand features, such as dunes, sand sheets, and sand hummocks. Six separate natural communities are represented in the La Quinta General Plan study area:

Stabilized shielded desert sand fields - These are lands composed of windblown sand lacking dune formations that are stabilized by vegetation and where important physical processes are interrupted by barriers such as roads, buildings, and landscaping. Most lands above the ancient Lake Cahuilla shoreline north of Avenue 50 fall within this community. This community contains many annual wildflowers, which can create stunning displays after winters of above-average rainfall. None of this

community within the study area is of such high quality that it has been targeted for conservation in the MSHCP. Most undeveloped lands in the sand fields are smaller parcels heavily disturbed by their proximity to roads.

Special status plant species found within the sand fields include the endangered Coachella Valley milkvetch. The possibility of occurrence of the Coachella Valley milkvetch is moderate, since the study area is at or beyond the east edge of the range of this species as far as is known. Slender woolly threads, an uncommon wildflower, has been recorded from Indian Wells and La Quinta near Highway 111, but has not been detected for many years.

Mesquite hummocks - This community consists of large clumps of honey mesquite shrubs forming hummocks over sand dunes or occurring on level terrain, presumably associated with high soil moisture or springs. In the alkaline soils of the southern part of the study area large expanses of saltbush and alkali goldenbush occupy the spaces between mesquites. The more disturbed parcels are invaded by tamarisk. The primary value of the mesquite hummock community is as wildlife habitat, rather than the diversity of its flora.

Sonoran creosote bush scrub - This is the most common natural community in the Coachella Valley area, dominated by creosote bush, burrobush, brittlebush, and other common desert perennials. This community may contain a very high proportion of annual wildflowers, representing 75% of the flora. Sonoran creosote bush scrub is found mainly above the shoreline of ancient Lake Cahuilla.

Sonoran mixed woody and succulent scrub - This community occurs on the lower slopes of the Santa Rosa Mountains and is widespread, forming the south edge of the Coachella Valley. Diversity of perennial shrubs is high. Dominants include brittlebush, creosote bush, indigobush, catclaw acacia, and rock daisy. Several species of cacti are present. Sensitive species known from this community include California ditaxis and glandular ditaxis.

Desert dry wash woodland - Desert washes are found in alluvial fans below canyons of the Santa Rosa Mountains. Characteristic species include smoke tree, palo verde, and cheesebush. Intact desert washes ("smoke tree washes") have become quite uncommon in the Coachella Valley. Relatively good examples of smoke tree washes are found within the study area south of the cove and east of Bear Creek, and near the proposed Travertine development.

Tamarisk scrub - Tamarisk scrub is a weedy, virtual monoculture of any of several *Tamarix* species, usually supplanting native vegetation following major disturbance. This community is prevalent near the Desert Resorts Regional Airport and is misnamed as a "natural" community, since it is not composed of indigenous plant species.

In addition, the study area contains urban lands, which may contain plantings of native plants, especially cacti, smoke trees, and ocotillos; golf courses, which support a few native species; and agricultural lands, which do not support native plants but provide food, shelter, and water for a variety of birds.

Wildlife habitat and fauna

Habitats for wildlife within the General Plan study area generally follow the descriptions of natural communities, but also include urban lands, golf courses, and agricultural lands. The undeveloped lands offer far more productive habitat for native wildlife than developed or agricultural lands.

Golf courses provide food, water, and shelter for species that can adapt to the modified landscape, especially birds. Most amphibians, reptiles, and mammals cannot find conditions necessary for their survival, with notable exceptions such as rabbits and coyotes. High populations of doves, quail, and some songbirds utilize the golf courses. Palm tree plantings near water traps may be attractive to certain species of bats, notably the yellow bat, although this use is not well documented. Golf courses are also attractive to introduced species, such as starlings, house sparrows, and pigeons, which are somewhat undesirable from a biological perspective since they can displace native wildlife and compete for food resources in adjoining desert habitats. Water traps have been suggested as a medium for supporting *Culicoides* gnats, which can harbor diseases of bighorn sheep (Mullens and Dada, 1992).

Agricultural lands attract a number of species not found in desert scrub habitats. Bird use increases substantially with decreasing distance to the Salton Sea. Many waterbirds of the Salton Sea, including ibises, egrets, curlews, gulls and others forage on agricultural lands and in adjoining canals and ditches. Burrowing owls nest along ditches and forage for insects over many agricultural fields. Use of agricultural lands by native amphibians, reptiles, and mammals is minimal.

Rocky hillsides of the Santa Rosa Mountains offer habitat to a wide variety of wildlife, ranging from chuckwalla lizards to bighorn sheep. The contiguity of open space in these mountains provides habitat for many species that have large ranges, such as bighorn, but also including predators such as golden eagle and mountain lion. Most of the mountain range is designated as a Game Refuge by the California Department of Fish and Game, and two sections within the La Quinta city limits are within a Wilderness Study Area. These lands are considered eligible for Wilderness designation by Congress because of their primeval character and the lack of influence by man. One section, owned by the Bureau of Land Management, is required to be managed in a way that will not impair its future designation as Wilderness until Congress decides on whether protection given by the Wilderness Act is appropriate.

Sensitive animals inhabiting the rocky hillsides include the moth lacewing, prairie falcon, and bighorn sheep. The barefoot gecko could also be present, although the study area is north of its documented range.

Desert washes form a distinct habitat, one that connects the mountains and the valley floor. Washes are often used as travel corridors by wildlife utilizing both habitats. They contain distinct vegetation, notably smoke trees, palo verdes, and shrubs adapted to infrequent flooding.

Birds are more abundant in desert washes than in the surrounding rocky hillsides or creosote bush scrub flats, and typical species include verdin, phainopepla, and black-tailed gnatcatcher. This habitat is productive for several species of lizards and snakes, as well as for a diversity of nocturnal rodents. Undisturbed desert wash habitats have declined significantly in the Coachella Valley due to urbanization and flood control.

Blowsand deposits are found throughout the northern part of the study area. This habitat has been significantly altered by shielding from windbreaks, buildings, roads, and landscaping in upwind areas. All existing habitat in the study area is considered to not be viable in the long term for perpetuation of the wildlife it now supports. Many endemic species are found in this habitat, including several invertebrates adapted to the specialized conditions. These include the Coachella

giant sand treader cricket (*Macrobaenetes valgum*), sandroach (*Arenivaga investigata*), dune beetles (e.g. *Edrotes barrowsi*) several scorpions (including *Paranurctonus mesarnsis* and *Hadrurus arizonensis*) and the giant red velvet mite (*Dinothrombium pandorae*). The most well-known endemic animal is the Coachella Valley fringe-toed lizard. Several other declining species occur, such as the flat-tailed horned lizard, burrowing owl and Palm Springs round-tailed ground squirrel.

The mesquite hummocks are attractive to a number of resident birds. Verdin, phainopepla, and black-tailed gnatcatcher nest within the hummocks. Flocks of wintering sparrows utilize the hummocks and the adjacent desert scrub. Mesquite hummocks offer refuge to native birds, including the sensitive LeConte's thrasher and Crissal thrasher. The Palm Springs round-tailed ground squirrel also is found in this habitat. Nearly all of the mesquite hummocks in the study area have been isolated and fragmented, and are not viable as conservation areas in the long term. Many are degraded by vehicle tracks and illegal dumping.

Sensitive species

A number of plants and animals are termed sensitive species because their populations or habitat are declining, they are naturally rare, or they are particularly sensitive to development. The U. S. Fish and Wildlife Service and the California Department of Fish and Game maintain lists of these species and provide information on locations where they are known to be present or might occur and should therefore be considered in biological surveys. In addition, the California Native Plant Society, a non-profit conservation organization, maintains a listing of native flora it believes to be rare and/or endangered. Tables 1-5 list those species reported by these agencies as potentially occurring within the study area. The tables also include species addressed by the Coachella Valley multispecies plan. The status designation explains the different level of protection or knowledge about the species rarity. A discussion of each of the species on the tables follows the explanation of the status designations.

TABLE 1. Sensitive Flora Reported From the Vicinity of La Quinta.

Sensitive species	Habitat and Distribution	Activity Season ¹	Status Designation ²	Occurrence Potential ³
<i>Astragalus lentiginosus</i> var. <i>cochellae</i> Coachella Valley milkvetch	Sand dunes and sand sheets Coachella Valley.	Feb to May	Fed: E Calif: ND CNPS: List 1B R-E-D: 2-2-3	Moderate Edge of range
<i>Chamaesyce platysperma</i> Flat-seeded spurge	Dunes, sand flats, Sonoran Desert scrub SE Calif., Ariz., Mexico	Feb to May	Fed: SC Calif: ND CNPS: List 1B R-E-D: 3-2-2	Very low
<i>Ditaxis californica</i> California ditaxis	Washes, alluvial fans, Sonoran Desert scrub SE Calif., Ariz., Mexico	Mar - May	Fed: SC Calif: ND CNPS: List 1B R-E-D: 3-2-3	Occurs
<i>Ditaxis clariana</i> Glandular ditaxis	Rocky hillsides, canyon washes Sonoran mixed woody and succulent scrub. SE Calif. AZ, Baja	Dec - Mar	Fed: ND Calif: ND CNPS: List 2 R-E-D: 3-2-1	High
<i>Nemacaulis denudata</i> var. <i>gracilis</i> Slender woolly heads	Dunes, sand flats, Sonoran Desert scrub SE Calif., Ariz., Mexico	Mar - May	Fed: ND Calif: ND CNPS: List 2 R-E-D: 2-2-1	High Recorded

TABLE 2. Sensitive Invertebrates Reported From the Vicinity of La Quinta.

Sensitive species	Habitat and Distribution	Activity Season ¹	Status Designation ²	Occurrence Potential ³
<i>Macrobaenetes valgum</i> Coachella giant sand treader cricket	Dunes and sand flats Coachella Valley	Spring - Summer	Fed: SC Calif: ND	High
<i>Stenopelmatus cahulaensis</i> Coachella Valley Jerusalem cricket	Dunes and sand flats W. Coachella Valley	Spring - Summer	Fed: SC Calif: ND	Low Probably out of range
<i>Spaniacris deserticola</i> Coachella Valley grasshopper	Sandy flats with <i>Tiquilia</i> Coachella Valley, Imperial Co. San Bern. Co., Sonora	August - October	Fed: ND Calif: ND	Occurs
<i>Dinacoma caseyi</i> Casey's June beetle	Alluvial fans Coachella Valley	April	Fed: ND Calif: ND	Unknown
<i>Euphilotes enoptes cryptorufes</i> Dark aurora blue (Dotted blue)	Santa Rosa & San Jacinto Mts.	May - July	Fed: ND Calif: ND	Absent
<i>Cahuillus indioensis</i> Coachella desert snail	Rocky hillsides	Wet periods	Fed: ND Calif: ND	High
<i>Oliarces clara</i> Moth lacewing "Cheeseweed owlfly"	Desert canyons with creosote bush. Riverside, San Bernardino, Imperial counties, Arizona	April - May	Fed: SC Calif: ND	High

TABLE 3. Sensitive Reptiles Reported From the Vicinity of La Quinta.

Sensitive species	Habitat and Distribution	Activity Season ¹	Status Designation ²	Occurrence Potential ³
<i>Gopherus agassizi</i> Desert tortoise	Creosote bush scrub Deserts of CA, AZ, NV, UT	Mar - Oct	Fed: T Calif: T	Moderate
<i>Uma inornata</i> Coachella Valley fringe-toed lizard	Dunes, sandy areas, wind- blown deposits. Coachella Valley.	Spring - Summer	Fed: T Calif: E	Occurs Recorded May be extirpated in city
<i>Phrynosoma mc'calli</i> Flat-tailed horned lizard	Dunes, sandy flats, washes Riverside and Imperial counties, Arizona, Mexico	Spring - Summer	Fed: SC Calif: ND	High Recorded
<i>Sauromalus obesus</i> Chuckwalla	Rocky outcrops and mountain slopes	Spring - Summer	Fed: SC Calif: ND	Occurs

TABLE 4. Sensitive Birds Reported From the Vicinity of La Quinta.

Sensitive species	Habitat and Distribution	Activity Season ¹	Status Designation ²	Occurrence Potential ³
<i>Falco mexicanus</i> Prairie falcon	Cliffs SW United States	Year - round	Fed: ND Calif: CSC	Occurs
<i>Aquila chrysaetos</i> Golden eagle	Cliffs Northern hemisphere	Year - round	Fed: ND Calif: CSC	High Foraging, nesting?
<i>Athene cunicularia</i> Burrowing owl	Deserts, grasslands, agricultural land. Western U. S.	Year - round	Fed: ND Calif: CSC	Occurs Recent records
<i>Lanius ludovicianus</i> Loggerhead shrike	Deserts, grasslands most of U. S.	Year - round	Fed: SC Calif: ND	Occurs
<i>Toxostoma dorsale</i> Crissal thrasher	Dense desert scrub, mesquite, washes. Western U. S.	Year - round	Fed: ND Calif: CSC	High
<i>Toxostoma lecontei</i> LeConte's thrasher	Open desert scrub, cactus SE California	Year - round	Fed: ND Calif: CSC	High

TABLE 5. Sensitive Mammals Reported From the Vicinity of La Quinta.

Sensitive species	Habitat and Distribution	Activity Season ¹	Status Designation ²	Occurrence Potential ³
<i>Lasiurus ega</i> Southern yellow bat	SE Calif. to Texas, Mexico	Year - round	Fed: ND Calif: ND	High
<i>Spermophilus tereticaudus chlorus</i> Palm Springs round-tailed ground squirrel	Dunes and sandy flats Coachella Valley	Year - round	Fed: SC Calif: ND	Occurs
<i>Perognathus longimembris bangsi</i> Palm Springs little pocket mouse	Desert scrub with sandy soil W. end of Coachella Valley, Thousand Palms, base of Indio Hills	Spring - Summer	Fed: SC Calif: ND	Moderate? Habitat present May be out of range
<i>Ovis canadensis</i> Bighorn sheep	Rocky hillsides	Year - round	Fed: END Calif: ND	Occurs

Definitions of Status Designations and Occurrence Probabilities

Federal designations: (U. S. Endangered Species Act, U.S. Fish and Wildlife Service):

END: **Federally listed, Endangered.**THR: **Federally listed, Threatened.**

SC: Species of concern. Threat and/or distribution data are not sufficient to support federal listing at this time.

ND: No designation.

State designations: (California Endangered Species Act, California Dept. of Fish and Game)

END: **State listed, Endangered.**THR: **State listed, Threatened.**

CSC: California Species of Special Concern.

ND: No designation.

Definitions of occurrence probability:

Present: Observed on the site by or recorded on-site by other qualified biologists.*High:* Recorded in similar habitat in region by qualified biologists, or habitat on the site is a type often used by the species and the site is within the known range of the species.*Moderate:* Reported sightings in surrounding region, or site is within the known range of the species and habitat on the site is a type occasionally used by the species.*Low:* Site is within the species' known range, but habitat on-site is rarely used by the species, or site is questionably within the range of the species.*Absent:* A focused survey failed to detect the species, or, no suitable habitat is present.

California Native Plant Society (CNPS) Designations: (Note: According to CNPS [Skinner and Pavlik 1994], plants on Lists 1B and 2 require mandatory consideration under the California Environmental Quality Act.)

List 1B: Plants rare and endangered in California and throughout their range.

List 2: Plants rare, threatened or endangered in California but more common elsewhere.

CNPS R-E-D Code:

Rarity 1: Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction or extirpation is low at this time.

2: Occurrence confined to several populations or one extended population.

3: Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported.

Endangerment

1: Not endangered.

2: Endangered in a portion of its range.

3: Endangered throughout its range.

Distribution

1: More or less widespread outside California.

2: Rare outside California.

3: Endemic to California (i.e., does not occur outside California).

References: USFWS (1990, 1994, 1996), Remsen (1978), Williams (1976), and Skinner and Pavlik (1994).

PLANTS

Coachella Valley milk vetch (*Astragalus lentiginos* var. *coachellae*) is a short-lived perennial legume occurring primarily in the Coachella Valley (CNPS, 1994), although an outlying population has been located near Desert Center. It was proposed for federal listing as endangered on May 8, 1992; and a final rule to list this plant as endangered was made in October 1998. The primary known range of the Coachella Valley milk-vetch is between Cabazon and the west boundary of Indio, where it exists in twenty locations (USFWS 1992). The closest reported location to the study area is on the Coachella Valley Preserve, approximately one mile north of the northern study area boundary. The majority of the study area is probably located outside the range of this species, although the remaining blowsand habitat appears suitable to support this plant.

Flat-seeded spurge (*Chamaesyce platysperma*) is a spring-flowering annual that blooms from February until May and inhabits sandy soils, including dunes and blowsand drifts. The California Native Plant Society (1994) notes four California occurrences, two from San Diego County, one questionable report from San Bernardino County, and one from Riverside County. The Riverside County occurrence was from 1914 near Thousand Palms in the Coachella Valley. Its primary range is northern Mexico, and the Coachella Valley specimen was probably an isolated disjunct (Felger 1980). Neither Zabriskie (1979) nor Jaeger (1941) discussed this species in their comprehensive floras. Many biological reports from the Coachella Valley have considered this plant, but it has not been relocated. The likelihood that it occurs within the study area is very low.

California ditaxis (*Ditaxis californica*) was originally described in La Quinta from Marshall Canyon, an area along Washington Street that is now developed. This plant is found in dry washes, flood plains, and rocky alluvial fans. It is an annual or short-lived perennial that persists in only four locations in the Coachella Valley, along with about ten other occurrences to the east (Eagle Mountains, Mecca Hills, Orocoopia Mountains). Because so little is known of its natural history and specific distribution, a high likelihood exists for discovery of other populations within the general plan study area. All existing known populations, which consist of only a few plants each, should be considered significant. The validity of this species had been questioned by some botanists, and additional taxonomic work is needed.

Glandular ditaxis (*Ditaxis clariana*, formerly *D. adenophora*) is a plant of rocky hillsides and canyon mouths, where it may grow on rocky or sandy substrates. It occurs in Magnesia Springs Canyon in Rancho Mirage, (LaPré, 1981a) but was not recorded in Deep Canyon (Zabriskie, 1979) or in Bear Creek (LaPré, 1981b). Glandular ditaxis may still occur in several places within the study area at the base of the Santa Rosa Mountains, and should be looked for in areas of suitable habitat.

Slender woolly-heads (*Nemacaulis denudata* var. *gracilis*) is found within the blowsand habitats of the General Plan study area, but is seldom recorded. This plant is a small wildflower that only appears in years of above-average rainfall. The two nearest reported locations are from Highway 111 in Indian Wells and La Quinta. Slender woolly-heads ranges into San Diego County, and is known from Arizona, Baja and Sonora, Mexico.

INVERTEBRATES

Several endemic invertebrates have been detected in the Coachella Valley. Most of these are associated with blowsand habitats. Protection of invertebrates is in its infancy because so little is known about the majority of the species. However, the Coachella Valley MSHCP has considered five insects for possible inclusion in the plan. These are:

Coachella giant sand-treader cricket (*Macrobaenetes valgum*)
Coachella Valley Jerusalem cricket (*Stenopelmatus calhualaensis*)
Coachella Valley grasshopper (*Spaniacris deserticola*)
Casey's June beetle (*Dinacoma caseyi*)
Dotted blue (*Euphilotes enoptes cryptorufes*)

In addition, the moth lacewing (*Oliarces clara*) has been identified by the Fish and Wildlife Service as a restricted-range species of concern.

The **Coachella giant sand-treader cricket** (*Macrobaenetes valgum*) is an insect adapted for life in sand dunes and windblown sand deposits. Reported locations from the California Natural Diversity Data Base include Palm Springs, 2 mi. W of Indio, 4 mi. W. of Indio, Thousand Palms, and Palm Desert. The closest known location is in the Bermuda Dunes portion of the study area, and may no longer be extant. The collection dates for all of these localities was May. This cricket was captured in pitfall traps on Edom Hill in February 1994 (Tierra Madre Consultants 1994). The likelihood of occurrence of this species is considered high, since windblown sand is present in several areas, and the study area is apparently within the range. Modeled habitat for the giant sand treader cricket is illustrated on Map 3.

The **Coachella Valley Jerusalem cricket** (*Stenopelmatus calhualaensis*) is another sand specialist insect with a very restricted range. It was discovered west of Palm Springs in 1962, and the description was published in 1968 (Tinkham 1968). Known sites include Palm Springs depot (near Windy Point) and the Palm Springs Airport. A recent biological study detected the Jerusalem cricket in Cabazon (Tierra Madre Consultants, 1999). Pitfall traps set on Edom Hill in February 1994 failed to capture this species (Tierra Madre Consultants 1994). Its seasonal abundance is not known, but it has been collected in May, July, and November, and perhaps can be found whenever sufficient moisture brings the adults to the surface. Existing information suggests that the Coachella Valley Jerusalem cricket may only be found in sand deposits at the west end of the Coachella Valley. Certain sandy deposits and mesquite hummocks appear to offer suitable habitat, but the study area is believed to be east of the animal's range. This species is therefore judged to be absent from the La Quinta General Plan study area, but its distribution is so poorly known that a determination cannot be made with certainty.

The **Coachella Valley grasshopper** (*Spaniacris deserticola*) is found primarily along the old shoreline of Lake Calhulla at the sea level contour. Its range is not well documented, but appears to extend south and east into the Colorado Desert for some distance. Existing collections include only one site within the study area at the eastern edge, but this insect is undoubtedly present in locations where its primary food plants, coldenia, (*Tiquilia plicata* and *T. palmeri*) are found. Although not identified as a species of concern by the Fish and Wildlife Service or California Department of Fish and Game, this is an insect with a rather restricted range as far as is known, and is one of the more unique invertebrates of the

Coachella Valley. It has been identified as a target species by the Coachella Valley multispecies Habitat Conservation Plan.

Habitat for the **Casey's June beetle** (*Dinacoma caseyi*) near Palm Springs, the only known location, is a rocky alluvial area at the base of the San Jacinto Mountains. Certain small areas within the General Plan study area approximate the terrain where this species is known. Additional surveys during the April activity period are needed throughout suitable habitat in the Coachella Valley in order to better determine the conservation requirements of this rare insect. These surveys are best undertaken by CVAG as part of the multispecies plan research.

The **dark aurora blue (dotted blue)** (*Euphilotes enoptes cryptorufes*) butterfly is a newly-described subspecies from the Santa Rosa and San Jacinto Mountains and the Sierra Juarez of Baja California (Pratt and Emmel, 1998). It occurs at higher elevations than those of the General Plan study area. This butterfly is associated with the host plant *Eriogonum davidsonii*, which is not found within the study area. Therefore, the dark aurora blue is presumed absent from this location.

Land snails occurring in desert habitat are poorly known, but they appear to have evolved into several species, each with a very narrow range. They are most often found in mountainous areas or rockslides, and are active during the brief periods of desert rainfall. The rocky hillsides are very likely to support populations of the **Coachella desert snail** (*Cahuillus indioensis*), a species not on the CVAG multispecies list. Threats to this species are believed to be minimal.

The **moth lacewing** (*Oligares clara*), referred to as "cheeseweed owl" by the U. S. Fish and Wildlife Service, is a little-known insect associated with desert canyons. Its known distribution is the desert portions of Riverside, San Bernardino, and Imperial counties in California and Yuma county in Arizona (Faulkner 1990). In Riverside County, the moth lacewing has been collected near Palm Springs, in Deep Canyon (Palm Desert, in collection of UC Riverside), Thousand Palms Canyon (Belkin 1954) and Painted Canyon (east of Mecca).

This insect is active as an adult from mid-April through mid-May, where it has been found in large numbers after a mass emergence. The larvae and pupae live in the soil, and are believed to feed on roots of creosote bush. Upon emergence, the moth lacewings fly up to gather on rocks at high points on a canyon wall, with the males forming large aggregations. Females also fly up and rest on rocks, and shaded areas are necessary. After mating, the females deposit eggs in the sand at the base of shrubs. Faulkner (1990) stated that this insect "is not, as might be expected, a rare species but rather an extremely localized one with a short-lived adult stage."

The study area appears to be within the range of the moth lacewing, and contains creosote bushes, the presumed larval host plant. The terrain in the canyons at the toe of the slopes of the Santa Rosa Mountains is suitable for the adult mating behavior after emergence. A high likelihood of occurrence in the southwest mountainous areas of the City is predicted for this unusual insect. Although termed a federal "species of concern", threats to the moth lacewing are few, and it is probably not rare, as indicated by its relatively wide distribution, but just rarely encountered because of its very narrow period of emergence.

REPTILES

The **desert tortoise** (*Gopherus agassizi*) occurs in canyon bottoms, on rocky hillsides, and especially in sandy and gravelly washes and flats. The tortoise requires firm enough soil to support its burrows, as it may spend up to six months of the year underground. Burrows are typically found at the bases of shrubs or in the banks of washes. Activity is greatest during the spring and early summer months, and to a lesser extent, during fall. During winter, tortoises retreat to burrows where they hibernate (Stebbins 1954).

Tortoise populations have declined seriously due to degradation, loss and fragmentation of habitat, vandalism, highway collisions, disease, and predation by ravens. It is listed as a Threatened species under both state and federal Endangered Species Acts.

Desert tortoises occur at the southeast corner of the Coachella Valley Reserve (Barrows, personal communication). The U. S. Fish and Wildlife Service and Bureau of Land Management have indicated densities of 0-20 tortoises per square mile in the La Quinta General Plan study area. LaPré (1981a) reported a tortoise shell from the Bear Creek alluvial fan, and tortoises are known in low densities from the Deep Canyon Desert Research Center. One tortoise was found in a wash at the Canyons at Bighorn development in Palm Desert. It is likely that a few tortoises remain within the study area in low densities on undeveloped lands at the base of the Santa Rosa Mountains. The modeled habitat for the desert tortoise is illustrated on Map 4.

The **Coachella Valley fringe-toed lizard** (*Uma inornata*) is a small "sand specialist" reptile listed as a threatened species by the U. S. Fish and Wildlife Service and as endangered by the California Fish and Game Commission, both in 1980. This lizard inhabits areas of blow sand: sand dunes, sand sheets, hummocks, and local drifts. A Habitat Conservation Plan (HCP) covering the entire range of the species was approved in 1985. The HCP for the Coachella Valley fringe-toed lizard addressed conservation measures for this threatened species on a regional basis. All of the La Quinta General Plan study area was considered by the plan. A large portion of the plan area was occupied habitat at that time (1985) and a greater area of historic habitat was defined. A mitigation fee of \$600/acre was established for certain lands in the historic range of the species. The fees were (and are) used to acquire three reserves where the lizard will survive in perpetuity. The fee area covers the northern portion of the study area (Map 5).

The California Department of Fish and Game was not a signatory to the 1985 HCP for the fringe-toed lizard, and did not at that time have statutory authority to issue incidental take permits for endangered species. The December 30, 1998 regulations implementing the California Endangered Species Act now allow for incidental take of listed species pursuant to a permit from the Department (called a 2081 permit). New urban development projects within the historical range of the lizard are now required to obtain this permit from the Department of Fish and Game if the species is identified on site.

After discussion with the cities in the Coachella Valley and with CVAG, the Department has agreed to a regional mitigation plan for the fringe-toed lizard, which involves payment of a mitigation fee of \$600/acre for all projects with the potential to affect fringe-toed lizards.

The **flat-tailed horned lizard** (*Phrynosoma m'calli*) is found in Riverside and Imperial counties in California, and in Arizona and Mexico. It inhabits sand dunes, sheets, and hummocks, as well as gravelly washes. The Coachella Valley is at the northern end of its range, and few recent records of this species are known. Based on past abundance at certain locations, populations of the flat-tailed horned lizard were believed to have declined substantially, and the lizard was proposed as a federally threatened species in 1993. The California Fish and Game Commission also considered it for endangered

status, but the listing proposal was rejected by the Commission in 1989. After considerable controversy and public input, the U. S. Fish and Wildlife Service withdrew a proposal to list this lizard as threatened (USFWS 1997), based on a lack of reliable data on threats, and on a management strategy recently formulated by the BLM and other agencies (Foreman 1997). This strategy proposes that five reserves be established for protection of this species. Four of these are in Imperial and San Diego counties, and another is in Arizona. In addition, the conservation strategy encourages the development of one additional flat-tailed horned lizard management area in the Coachella Valley, perhaps through participation in the Coachella Valley multi-species plan. No location was suggested for a preserve in the Coachella Valley.

The flat-tailed horned lizard is known to occur in the Coachella Valley Preserve, and has been reported within the study area. However, focused surveys in apparently suitable habitat have failed to record this species in several cases (e.g. Tierra Madre Consultants, 1991, Impact Sciences, 1998). The modeled habitat for the flat-tailed horned lizard is illustrated on Map 6.

The **chuckwalla** (*Sauromalus obesus*) is a large, herbivorous lizard found on rocky slopes and outcrops throughout the Mojave and Colorado Deserts. It ranges from Utah, Nevada, Arizona, and California to Baja and Sonora Mexico. Locally, it is found throughout the lower slopes of the Santa Rosa Mountains. The chuckwalla is a federal Species of Concern, but remains common throughout most of its range, and threats are few within its rocky habitat. Several occurrences are known from within the General Plan study area, e.g. La Quinta Resort (Tierra Madre Consultants, 1998), La Quinta Cove (Comett, 1999) and the CVWD Storage Tank (Circle Mountain Biological Consultants, 1994).

BIRDS

The range of the **prairie falcon** (*Falco mexicanus*) extends over much of the western United States. It is an uncommon resident in arid parts of southern California (Garrett and Dunn 1981). Known home ranges during breeding season have varied from about two to ten square miles. It nests on high cliff faces and feeds primarily on small birds and mammals it captures in open, arid lands. Threats include pesticide contamination, robbing of eyries by falconers, shooting, and human disturbances near nest sites (Remsen 1978). It is a California Species of Special Concern.

An eyrie was located within the study area in the hills above Bear Creek in 1981 (LaPré, 1981a). Three eyries were reported as being located within the La Quinta Redevelopment Area in 1983, with a fourth just outside that boundary (LSA, 1993). Many of the cliff faces of the Santa Rosa Mountains within the study area provide suitable nesting habitat, and several nesting pairs are probably still present.

Golden eagle (*Aquila chrysaetos*) is federally protected under the Bald Eagle and Golden Eagle Protection Act and its nesting and wintering habitat is considered a California Special Concern. It is one of North America's largest birds, with a wingspan of up to 7 feet. It is found throughout North America, but in no part of the range is it common. Golden eagles nest in rugged, hilly, or mountainous areas adjacent to open terrain where their prey, small to medium-sized mammals, may be found. Territory sizes vary with prey availability and may be 36 square miles in southern California (Zeiner et al. 1990). Threats to golden eagles include loss of habitat, shooting, eggshell thinning from pesticide ingestion, and electrocution from high voltage power lines. Although golden eagles that breed in southern California are probably year-round residents, birds from more northerly latitudes migrate south in fall, resulting in higher numbers in southern California during winter.

Coachella Valley reports from the NBBB for nesting golden eagles are from Whitewater Canyon. They are also known from Deep Canyon, and wintering birds can be found throughout the

valley and the Santa Rosa Mountains. These birds can be expected to forage over the study area occasionally and suitable nesting habitat is present within the mountains south of the cove and west of Lake Cahuilla.

The **burrowing owl** (*Athene cunicularia*) is a diurnal owl, which is non-migratory in this portion of its range. It excavates nests in the ground, often enlarging burrows of ground squirrels. This bird of prey is found in low densities in desert habitats, but can occur in much higher densities near agricultural lands, where rodent and insect prey are more abundant. It is likely, based on the habitat quality and historical records, that burrowing owls are found throughout the study area. One current (1999) record is known from the Desert Resorts Airport (Tierra Madre Consultants, 1999). Burrowing owls were seen at this location and somewhat to the east in 1994 (The Planning Center, 1995).

The **loggerhead shrike** (*Lanius ludovicianus*) is found throughout the southern and western United States. Its populations have been depleted in many parts of the country, such as the Midwest and Florida, where it is listed as threatened. The loggerhead shrike remains fairly common in California, especially in the desert regions. Even with urbanization of many desert areas, the shrike does not appear to be declining to the point of demanding extraordinary conservation efforts, and it was not included as a target species of the Coachella Valley multispecies Habitat Conservation Plan. This bird is relatively common in undeveloped areas of La Quinta, the surrounding hillsides, and the edges of agricultural fields.

In California, the **crissal thrasher** occurs commonly along the Colorado River, and less commonly across the Colorado and Mojave Deserts. In the Colorado Desert it occurs in mesquite thickets or heavily vegetated washes throughout the Imperial and Coachella Valleys, west to the vicinity of Palm Springs. It is also found along the entire length of the Colorado River, and in certain portions of the Mojave Desert, where it occurs in somewhat localized populations. Eastern Mojave Desert populations can occur in washes within pinyon-juniper woodland. This species has declined seriously in the Coachella and Imperial Valleys due to conversion of its habitat to agricultural and urban lands, and the invasion of tamarisk thickets, which have displaced native mesquite.

The NDDB reports six records from the Coachella Valley. All of these are collections before 1941. One record was from Palm Springs in 1920, and the remaining records are from the lower valley near Coachella and Thermal. These birds are still reported annually on the Audubon Society's Christmas Bird Count from the remaining mesquite thickets near the north end of the Salton Sea. The crissal thrasher is a species proposed for coverage under the Coachella Valley multispecies plan.

Within the study area, the crissal thrasher is likely to be found in low numbers in the remaining mesquite hummocks and thickets near the Desert Resorts Regional Airport.

The **Le Conte's thrasher** (*Toxostoma lecontei*) inhabits areas with sparse desert scrub, especially those which contain small washes. It can be found throughout much of the Mojave and Colorado Deserts, and an isolated population exists in southwestern San Joaquin Valley, near Taft and Maricopa. Its population densities are among the lowest of passerine (perching) birds, with estimated densities in optimum habitat of less than five birds per square mile. This low population density decreases the probability of their detection by observers, along with their secretive habits. Only during breeding activities, when males sing from exposed perches (often the tops of shrubs), are they relatively easy to detect. Off-road vehicle activity and other human disturbance are believed to be extremely disruptive of this species, especially during breeding season.

Few recent records exist for LeConte's thrasher in the Coachella Valley, and its habitat associations are not clear. It apparently was never common in the blowsand region, and now is reported only sporadically in large undeveloped areas of creosote bush scrub or in isolated mesquite hummocks and thickets. It is a relatively common bird throughout the Mojave Desert in California, and no conservation areas within the Coachella Valley have been identified for this species. The U. S. Fish and Wildlife Service recorded this species from Bear Creek in 1981 (USDI, FWS, 1981).

MAMMALS

One species of bat is proposed for inclusion in the Coachella Valley multispecies plan. The December, 1999 biological analysis of the Plan's proposed conservation measures reduced the proposed coverage from ten species, because insufficient information was available for most bats. The entire study area could be utilized by bats at night for foraging, but select locations where roosts are (or may be) located near water offer the best habitat. Lake Cahuilla County Park provides a water source near the rocky hillsides, as does PGA West, The La Quinta Hotel, and other golf developments adjoining the hillsides. Bats play an extremely important role in ecosystem maintenance by regulating insect populations and contributing to pollination of many plants. Because of the declines of many species throughout the southwest, conservation of all bats should be considered in the open space and conservation programs of local general plans.

The most important conservation action for bats is protection of roosts. Roosts are used during the day between foraging bouts (day roosts), in the winter for hibernation (hibernation roosts), in the summer for rearing of young (maternity roosts), and during migration as stopover points (transitory roosts). Most roosts are found in natural caves and abandoned mine adits, although old buildings and bridges are important to some species.

The general plan study area is unlikely to contain many bat roosts, but bridges over the Whitewater River, old mines in the Santa Rosa Mountains, and groves of untrimmed palm trees could support bats. Such sites should be surveyed before disturbance as part of the planning process.

The Coachella Valley is thought to be very important to the **southern yellow bat** (*Lasius ega*), which roosts in palms and forages over water. These conditions are met in the series of palm oases along the San Andreas fault and in the canyons of the Santa Rosa Mountains, as well as in tree nurseries and country clubs. The latter often trim the fronds, making the palms unsuitable as roost sites, however.

The **Palm Springs round-tailed ground squirrel** (*Spermophilus tereticaudus chlorus*) is a local subspecies of a fairly common desert squirrel. Hall (1981) lists records from Palm Springs, Cabazon, Whitewater, Coachella, and Mecca, and its range generally parallels that of the Coachella Valley fringe-toed lizard. Its preferred habitat is sandy flats, hummocks, and dunes, but it has recently been reported from below the ancient Lake Cahuilla shoreline in mesquite hummock habitat as well as from flood control channels throughout the Coachella Valley. This squirrel has been documented several times from within the La Quinta General Plan study area (e.g. west wash of Bear Creek, USDI, FWS, 1981, corner of Jefferson and 53rd, Tierra Madre Consultants, 1991, Village on the Green, Impact Sciences 1997, the Centre at La Quinta, Impact Sciences, 1998, Bienik Golf Driving Range, Cornett, 1997) and is believed to be present in undeveloped areas of sufficient size in all sandy habitats. The modeled habitat for the Palm Springs round-tailed ground squirrel is illustrated on Map 7.

The **Palm Springs little pocket mouse** (*Perognathus longimembris bangsi*) is a poorly-known desert rodent whose range has been described as extending from the San Geronimo Pass to Borrego Springs in San Diego County. This is one of 19 subspecies of the little pocket mouse, 6 of which occur in southern California (The Wildlife Society 1993). The little pocket mouse is widespread in the Mojave and Colorado Deserts, preferring flat terrain with sandy soils. It becomes dormant in the winter when night temperatures approach freezing.

In the Coachella Valley, the Palm Springs little pocket mouse is known from Palm Springs, Whitewater, Dos Palmas Spring (Santa Rosa Mountains), Snow Creek, Cabazon, and Banning. It has also recently been trapped at the southern base of the Indio Hills.

Williams (1986) did not list this rodent as a "species of special concern" in California. He presented localities for the Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) that included some of the same locations cited by Grinnell and Swarth: Cabazon, Dos Palmas Spring, Whitewater Ranch, and near Banning. The distribution and identity of these two subspecies is in need of scientific investigation.

The study area contains suitable habitat for the Palm Springs little pocket mouse on sandy undisturbed soils. Below the sea level contour, the soils may be too alkaline, especially in the saltbush scrub. The rocky hillsides do not appear to present suitable habitat for the pocket mouse. The nearest records are on the Coachella Valley Preserve and lands on the alluvial fans to the south and southwest. Although we know of no records from within the study area, it is possible that remnant populations of this rodent remain on undeveloped parcels on the valley floor in sandy habitats above the ancient Lake Cahuilla shoreline. The modeled habitat for the Palm Springs little pocket mouse is illustrated on Map 8.

Although **bighorn sheep** populations have declined dramatically in the past thirty years, the rocky hillsides of the Santa Rosa Mountains were formerly regularly used by the sheep. The Fish and Wildlife Service considers all of the slopes and part of the valley floor, out to a distance of 800 meters, to be historical bighorn habitat. In the past few years, intensive studies have shown that the sheep are accommodated to obtaining food and water on country clubs and residential and commercial properties adjoining the hillsides. Most of this habituation is with the northern Santa Rosa Mountains ewe group, which occupies the mountains above Rancho Mirage (USFWS, 1999a). Few recent (within the past five years) sightings have been reported from La Quinta, but the hillsides remain viable habitat and are important for recovery. Recent sign of bighorn activity was noted by Tierra Madre Consultants (1998) in the mountains above the cove, and bighorn were presumed to occur in the mountains above Lake Cahuilla (Circle Mountain Biological Consultants, 1994). The modeled distribution of bighorn sheep in the study area is illustrated on Map 9.

The hillsides must be considered sheep habitat. Direct impacts to bighorn from development projects, whether in the hills or on the valley floor, are rare or non-existent, but indirect impacts could be significant without mitigation. The primary indirect impact is accommodation to developed areas, which is considered an undesirable trait since it exposes the bighorn to disease vectors, poisonous plants, and risk of collision with vehicles.

The Fish and Wildlife Service has published a Recovery Plan for the bighorn (USFWS 2000b) and recently has designated Critical Habitat (USFWS 2000a, Map 9). The designation covers all of the hillsides within the City and includes some of the bordering flatlands and alluvial fans. Projects receiving federal funding will be required to initiate a consultation with the Service to determine if the proposed activities adversely modify the Critical Habitat. In addition to the designated Critical Habitat, the Fish and Wildlife has designated "essential habitat", which is an area defined by elevation and use patterns of the bighorn in the Peninsular Ranges. The boundaries of the two designations coincide in most areas,

including the La Quinta General Plan study area. Essential habitat has more of a biological basis, while Critical Habitat has a specific legal meaning requiring findings to be made when federal agencies enter consultation with the Fish and Wildlife Service on project-related effects.

Discussion

The City of La Quinta and the General Plan study area still harbors lands providing habitat for native desert plants and animals. Some of the remaining habitats, although fragmented by urbanization and agricultural uses, are remnants of the rather unique biological features of the Coachella Valley, particularly the sand dunes, sand sheets, and mesquite hummocks, which host a variety of endemic wildlife. The desert washes and mesquite thickets are likewise important as surviving remnants of high-value habitat of the Colorado Desert. Creosote bush scrub and rocky hillside habitats are more widespread on a regional basis, and their potential loss to development in the future represents less of an impact to the biodiversity of the Coachella Valley. However, the lower slopes of the rocky hillsides of the Santa Rosa Mountains are essential habitat for the endangered bighorn sheep. The hillsides also support bats and regionally important predators, including bobcat, mountain lion, golden eagle, and prairie falcon.

The Coachella Valley Multispecies Habitat Conservation Plan now in preparation offers the opportunity to assess important habitats and biological features of the Coachella Valley from a regional perspective. Conservation areas recommended by the HCP will protect larger and more viable habitats than those established within a particular jurisdiction, which are often referred to as "postage stamp" preserves. Participating jurisdictions would receive "incidental take permits" and assurances for the covered species under the state and federal endangered species acts. Thirty-one species have been targeted for conservation under the CV MSHCP.

The best way to achieve mitigation for incremental development that is cumulatively significant is to plan for the declining species and habitats on a regional basis. Participation in the CV MSHCP offers the opportunity to effect mitigation for loss of biological resources in a meaningful way. I recommend that the City continue to support the development of the CV MSHCP. When the plan is completed, the City could decide to adopt the provisions of the Plan, which will resolve the issues surrounding protection of the listed species and species of concern and adopt a standardized mitigation program.

Within the study area, the only lands likely to be considered as reserve quality for biological resources are the rocky hillsides of the Santa Rosa Mountains, which are essential habitat for bighorn sheep. Even though bighorn are not often recorded in many parts of the mountainous areas within La Quinta's jurisdiction today, the sheep utilized the entire Santa Rosa range extensively in the past, as recently as the 1970s and early 1980s (LaPré, 1981, Weaver and Mensch, 1970). If the problems of disease, parasites, and habitat encroachment are overcome, the hillside habitat adjoining La Quinta could again become regularly occupied by bighorn.

Recommendations

1. Designate all mountainous areas, generally following the toe of slope, as open space for protection of bighorn sheep and other species occurring in these habitats.
2. Designate the two square miles at the southeast corner of the city limits (Sections 25 and 30 of R 6E, T6S) within the Santa Rosa Mountains Wilderness Study Area as open space.

3. Biological survey requirements:

- A. Site specific surveys for evidence of bighorn sheep use in the mountainous areas are not necessary, since these areas are already known to provide habitat for this threatened species and should be presumed to be occupied or occupiable habitat.
- B. Undeveloped lands that have not been graded, cleared, or farmed at the base of the Santa Rosa Mountains should be surveyed at the appropriate season for the presence of glandular ditaxis and California ditaxis. These lands also may support low-density populations of the desert tortoise. Surveys should be conducted for these three species on ungraded lands south of the Cove and west of the levee on the alluvial fans and lower slopes of the Santa Rosa Mountains. The survey areas are best defined by using the modeled habitat for the desert tortoise prepared by the Coachella Valley Mountains Conservancy and CVAG, illustrated on Map 4.
- B. Sand sheets, dunes and hummocks within the boundaries of the Coachella Valley fringe-toed lizard Habitat Conservation Plan do not need surveys to detect the presence of the fringe-toed lizard. These lands should be presumed to be occupied or occupiable habitat for this species and payment of the mitigation fee of \$600/acre will satisfy requirements of the federal Habitat Conservation Plan. The mitigation fee will also comply with the state endangered species act, according to the Memorandum of Understanding by the Department of Fish and Game, Riverside County and the cities of the Coachella Valley after it is signed by the CDFG. Until that time, a separate incidental take authorization from the state will be necessary for projects in blowsand habitat where the fringe-toed lizard is present.
- D. Surveys are not recommended for the Casey's June beetle because the likelihood of finding this insect is so low and because the habitat is not well defined.
- E. Sand deposits throughout the study area should be surveyed at the appropriate season for potential presence of the blowsand endemics. These include the flat-tailed horned lizard, giant sand-treader cricket, slender woolly-threads and Coachella Valley milkvetch, although the eastern and southern range limits of the milkvetch are not well defined. Use of the modeled habitat maps for the sand-treader cricket and flat-tailed horned lizard is recommended for areas where these species should be surveyed. The woolly threads and milk vetch are most likely to occur in the same regions, which are shown on Maps 3 and 5.
- F. Agricultural lands being converted to development should be surveyed for the presence of burrowing owls according to the Department of Fish and Game protocol.

4. Large-scale developments such as country clubs should be encouraged to establish groves or plantings of untrimmed palm trees, which could provide roost sites for the southern yellow bat.
4. Projects involving reconstruction of bridges should perform biological surveys for bats to determine if significant roosts are present.

6. The City should consider the requirement that a barrier be constructed around the perimeter of any new project where the toe of slope of the Santa Rosa Mountains meets the valley floor if sheep are demonstrated to occur on the project site. This would protect bighorn sheep and prevent additional habituation and reliance on food and water from developed areas. Informal consultation or review by the U. S. Fish and Wildlife Service and California Department of Fish and Game should be completed prior to imposition of this recommendation. This barrier is one of the recommended conservation actions in the bighorn sheep Recovery Plan (USFWS, 2000).

7. The City should continue to participate in the planning for the multispecies plan.

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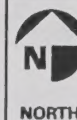
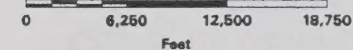
Map 3. Giant Sand Treader Cricket

City of La Quinta General Plan

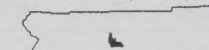
LEGEND

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 Township/Range Sections
 Railroads
 City Limits
 General Plan Planning Area
 City Sphere of Influence
 Coachella Giant Sand Treader Cricket Potential Distribution
 Recommended Survey Area
 Coachella Giant Sand Treader Cricket Archived Locations

Scale
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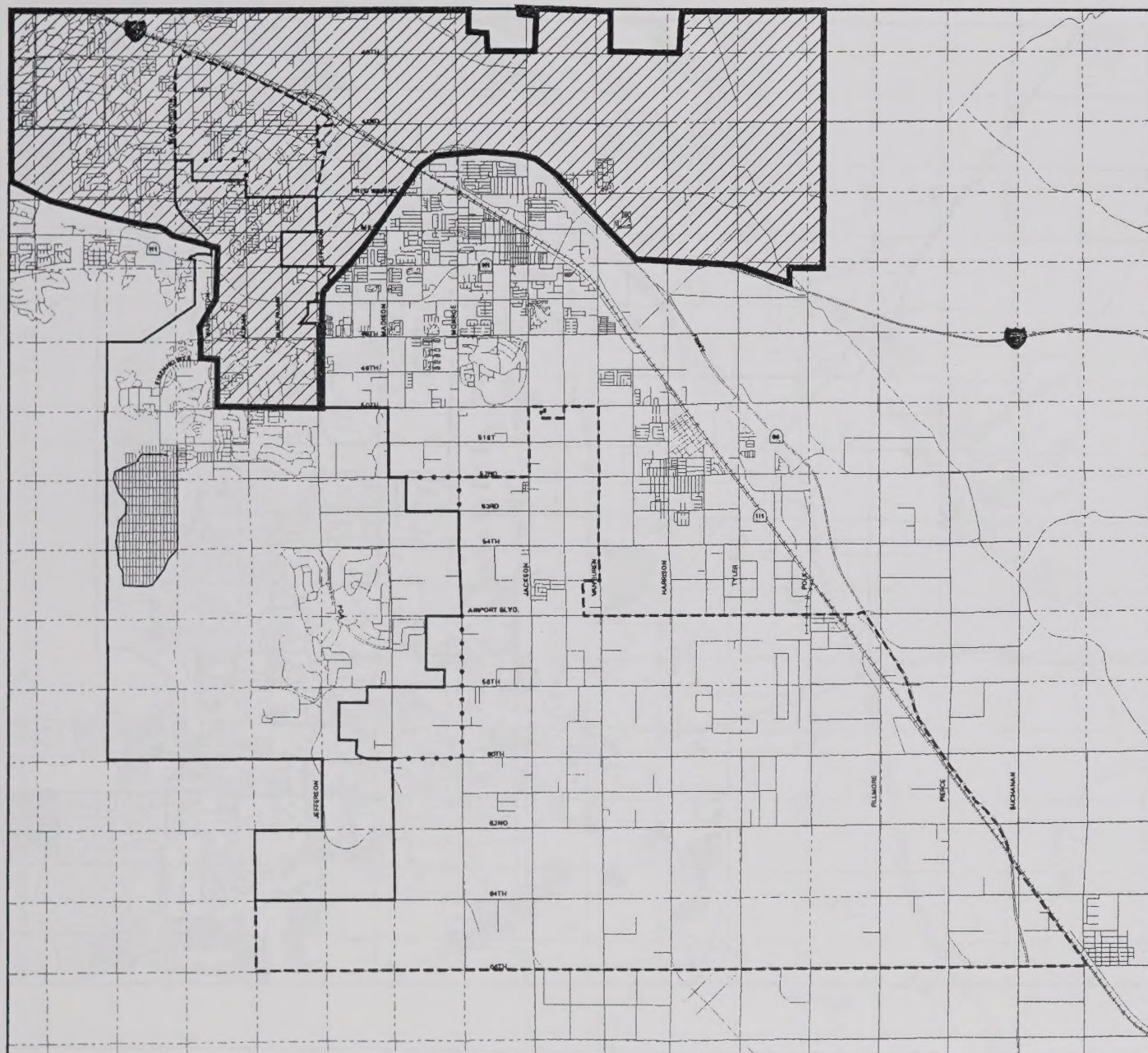


Riverside County Vicinity Map



Map Prepared on: July 10, 2000
Map Prepared by: Aerial Information Systems
Map Version No.: 5





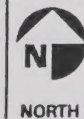
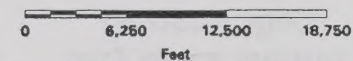
Map 5. Fringe-toed Lizard

City of La Quinta General Plan

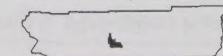
LEGEND

-  Roads
 Township/Range Sections
 Railroads
 City Limits
 General Plan Planning Area
 City Sphere of Influence
 Fringe-toed Lizard Fee Area

Scale
1:90,000



Riverside County Vicinity Map



Map Prepared on: July 10, 2000
Map Prepared by: Aerial Information Systems
Map Version No.: 5





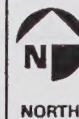
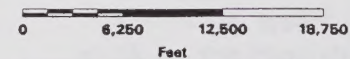
Map 6. Flat-tailed Horned Lizard

City of La Quinta General Plan

LEGEND

-  Roads
 Township/Range Sections
 Railroads
 City Limits
 General Plan Planning Area
 City Sphere of Influence
 Flat-tailed Horned Lizard Potential Habitat
 Recommended Survey Area
 Flat-tailed Horned Lizard Known Locations
 Flat-tailed Horned Lizard Archived Locations
 Flat-tailed Horned Lizard Scat Locations

Scale
1:90,000



Riverside County Vicinity Map

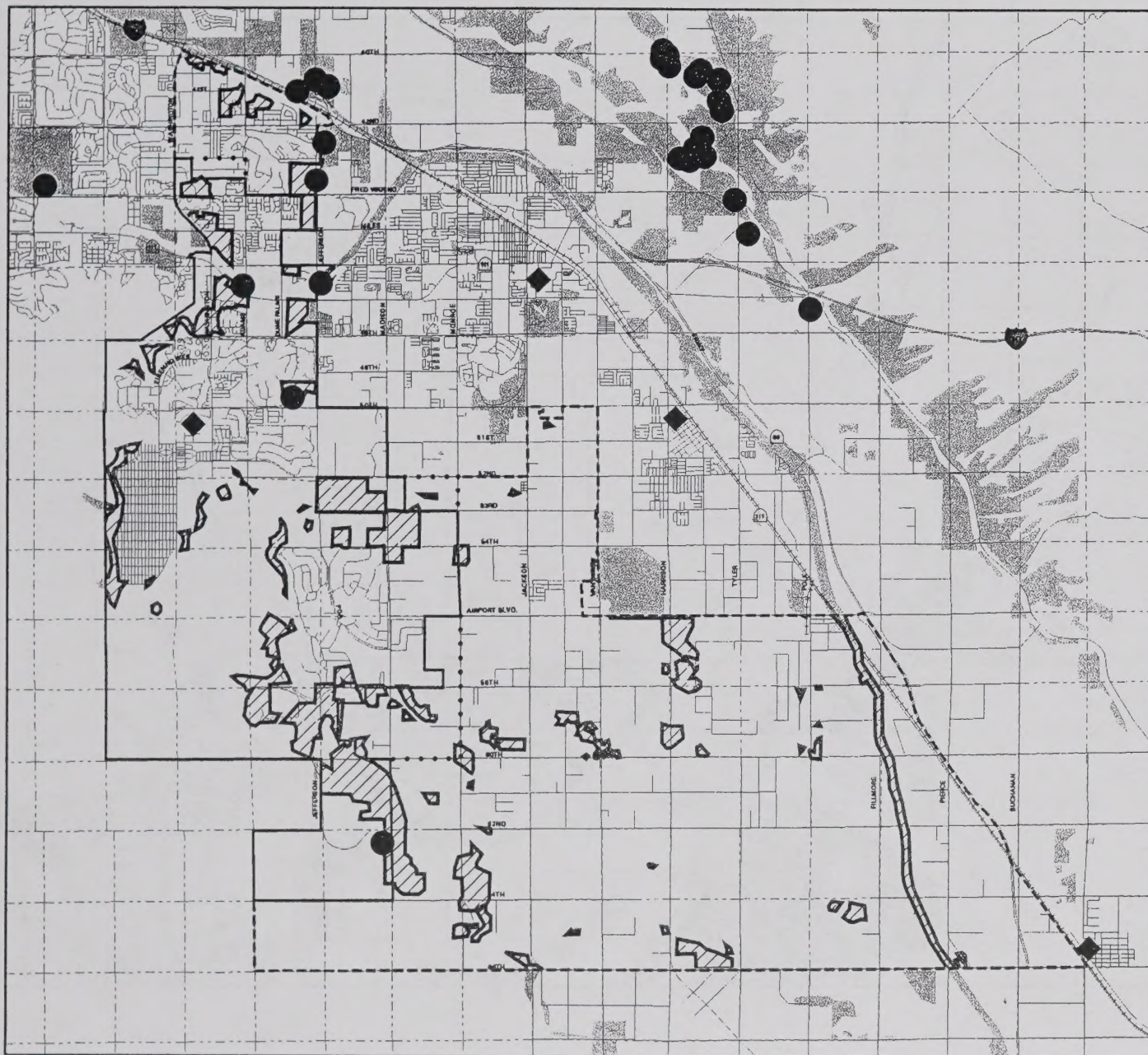


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Map 7. Palm Springs Ground Squirrel

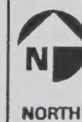
City of La Quinta General Plan

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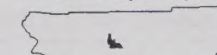
- Roads
- Township/Range Sections
- Railroads
- City Limits
- General Plan Planning Area
- City Sphere of Influence
- Palm Springs Ground Squirrel Potential Distribution
- Palm Springs Ground Squirrel Known Locations
- Palm Springs Ground Squirrel Archived Locations
- Recommended Survey Area

Scale
1:30,000

0 6,250 12,500 18,750
Feet



Riverside County Vicinity Map

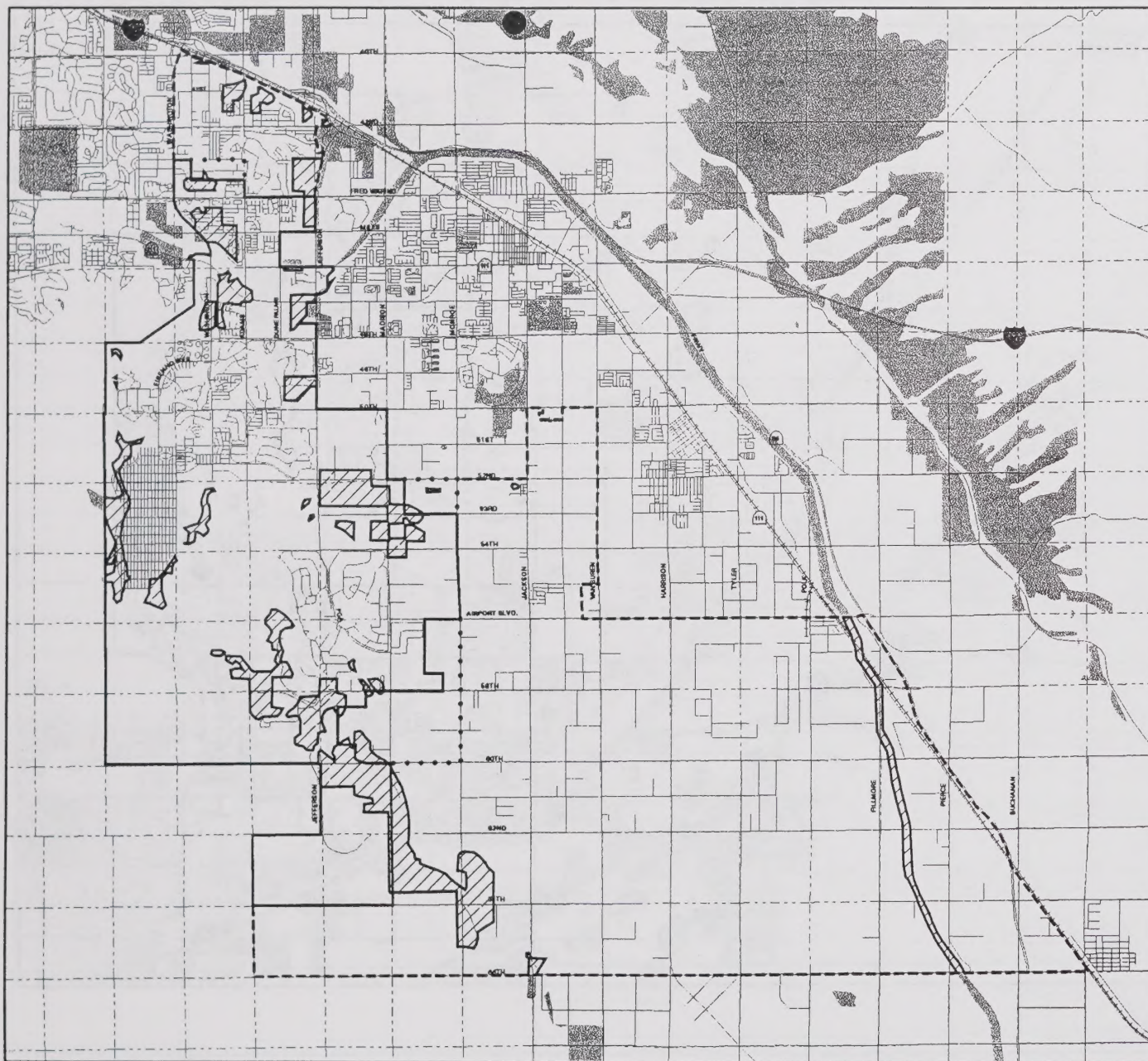


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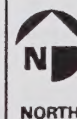
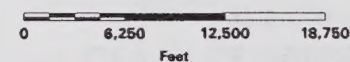
Map 8. Palm Springs Pocket Mouse

City of La Quinta General Plan

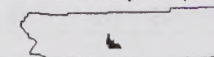
LEGEND

- Roads
- Township/Range Sections
- Railroads
- City Limits
- General Plan Planning Area
- City Sphere of Influence
- Palm Springs Pocket Mouse Potential Distribution
- Recommended Survey Area
- Palm Springs Pocket Mouse Known Locations

Scale
1:90,000



Riverside County Vicinity Map



Map Prepared on: July 10, 2000

Map Prepared by: Aerial Information Systems

Map Version No.: 5



APPENDIX D

**Paleontologic Resources Mitigation Plan
La Quinta General Plan
Riverside County, California**

Prepared by

**Section of Geological Sciences
San Bernardino County Museum
2024 Orange Tree Lane
Redlands, CA 92374
October, 1999**

PALEONTOLOGIC RESOURCES MITIGATION PLAN

LA QUINTA GENERAL PLAN RIVERSIDE COUNTY, CALIFORNIA

Prepared for:

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October, 1999

Confidential -- Not for Public Distribution

MANAGEMENT SUMMARY

The Section of Geological Sciences of the San Bernardino County Museum (SBCM) has prepared this *Paleontologic Resources Mitigation Plan (PRMP)* for the La Quinta General Plan. Pursuant to the requirements of the National Environmental Policy Act of 1969 (NEPA) and the California Environmental Quality Act of 1970 (CEQA) for mitigation of impacts to nonrenewable paleontologic resources, the PRMP reviews the paleontologic sensitivity of sediments exposed throughout the La Quinta region. The results of this review demonstrate that two (2) lithologic units that may be affected by development within the boundaries of the La Quinta General Plan study area have high potential to contain significant nonrenewable paleontologic resources: Pleistocene older alluvium and the informally-designated "Lake Cahuilla beds." These units contain fossils of Pleistocene through early Holocene age throughout their extent, and therefore are assigned high paleontologic sensitivity.

Mitigation measures recommended within the PRMP include:

- ◆ PA-1: Preparation and presentation of an orientation workshop to explain paleontologic mitigation guidelines and procedures to construction personnel.
- ◆ PA-2: Paleontologic monitoring in rock units determined to have high paleontologic sensitivity by a qualified professional vertebrate paleontologist with regional experience, including recovery of exposed resources and sampling to recover microfossil remains.
- ◆ PA-3: Stabilization, documentation and reburial of resources that cannot safely be recovered or otherwise preserved (e.g., avoided).
- ◆ PA-4: Preparation of recovered paleontologic resources to a point of identification and permanent preservation, including stabilization of large remains and screen washing of fossiliferous sediments to recover significant microfossil remains.
- ◆ PA-5: Preservation and curation of recovered significant paleontologic resources, including all associated contextual data, at a qualified professional repository such as the SBCM or another accredited curatorial facility with long-term retrievable storage.

Implementation of these mitigation measures by the City of La Quinta will effectively fulfill the legal requirements and obligations for preservation of significant paleontologic resources as outlined by both NEPA and CEQA.

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PALEONTOLOGIC RESOURCES LITERATURE REVIEW AND MONITORING PLAN CITY OF LA QUINTA GENERAL PLAN

Prepared by:

SECTION OF GEOLOGICAL SCIENCES
SAN BERNARDINO COUNTY MUSEUM

1: INTRODUCTION

1.1 SCOPE AND PURPOSE OF PLAN

The Section of Geological Sciences of the San Bernardino County Museum (SBCM) has reviewed the pertinent paleontologic and geologic literature, conducted a field examination of the study area, and prepared this *Paleontologic Resources Mitigation Plan* (PRMP) for the La Quinta General Plan. This PRMP is intended to detail the procedures employed to mitigate the impacts and effects of development-related excavation in the La Quinta area upon scientifically significant paleontologic resources. It provides for the discovery and retrieval of paleontologic resources, evaluation of the scientific significance of said resources, and mitigation of adverse impacts/effects to these resources as caused by excavation and construction-related activities. The PRMP also reviews existing relevant paleontologic locality information, discusses the geologic and paleontologic context of sediments present in the La Quinta region, and presents guidelines for paleontologic site evaluations and mitigation through data recovery, thereby providing important background and contextual information useful for the paleontologic resources management program. The logistics, procedures and methods outlined herein ensure compliance with the National Environmental Policy Act of 1969 (NEPA) and the California Environmental Quality Act of 1970 (CEQA).

The PRMP is a work plan for all of the paleontologic activities that will ensue during the course of mitigation programs in La Quinta. It is not the intent to present herein a comprehensive list of sites with discussions of all significant taxa that have been recovered from the vicinity of the La Quinta General Plan study area and its environs. A full treatment of all resource sites and taxa from the area of potential effect should be presented as a part of any final report of findings generated as a result of paleontologic mitigation activities. The PRMP offers a research-oriented framework and accompanying logistical guidelines to ensure that significant nonrenewable paleontologic resources unearthed by development in the City of La Quinta will be managed appropriately and in a timely manner, thereby effectively mitigating adverse impacts to said resources.

1.2 LEGAL CITATIONS REGARDING THE PROTECTION OF PALEONTOLOGIC RESOURCES

1.2.1 Federal Regulations

Statutes of the United States of America that incorporate provisions for the protection of paleontologic resources include:

Federal Antiquities Act of 1906 (P.L. 59-209, 32 Stat. 225).

Forbids and establishes criminal sanctions for disturbance of any object of antiquity on Federal land without a permit issued by an authorizing authority.

National Environmental Policy Act of 1969

(P.L. 91-190, 83 Stat. 852, 42 USC 4321-4327). Mandates policies to "preserve important historic, cultural and natural aspects of our national heritage" (Section 101.b4).

1.2.2 State of California -- Requirements

Fossil remains are a limited, nonrenewable, highly sensitive, scientific resource. In California, these resources are afforded protection against adverse impacts under the authority of the following State of California legislation (California Office of Historic Preservation, 1983):

California Environmental Quality Act of 1970

(13 Public Resources Code, 21000 et seq). Requires public agencies and private interests to identify the potential adverse impacts and/or environmental consequences of their proposed project(s) to any object or site significant to the scientific annals of California (Division 1, Public Resources Code: 5020.1 [b]).

Guidelines for the Implementation of CEQA (as amended 1 January 1999)

(CEQA Guidelines Sec. 15064.5). Provides protection for paleontologic resources by requiring that they be identified and mitigated as historical resources under CEQA. The CEQA Guidelines define historical resources broadly to include any object, site, area or place that a lead agency determines to be historically significant. The regulation goes on to provide that generally, a resource shall be considered "historically significant" if it has yielded or may be likely to yield information important in prehistory. Paleontologic resources fall within this broad category, and additionally are included in the CEQA checklist under "Cultural Resources."

Public Resources Code, Section 5097.5

(Stats 1965, c. 1136, p. 2792). Prohibits excavation or removal of any "...vertebrate paleontological site...or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands." Public lands are defined to include lands owned by or under the jurisdiction of the State of California or any city, county, district, authority or public corporation, or any agency thereof. Defines any unauthorized disturbance or removal of paleontologic, archaeologic and/or historic materials or sites located on public lands as a misdemeanor.

Public Resources Code, Section 30244.

Requires reasonable mitigation of adverse impacts to paleontological resources from development on public land.

2: INTERPRETING PALEONTOLOGIC SENSITIVITY

2.1 PALEONTOLOGIC RESOURCES

Paleontologic resources are the fossilized evidence of past life found in the geologic record. Despite the tremendous volume of sedimentary rock deposits preserved world-wide, and the enormous number of organisms that have lived through time, preservation of plant or animal remains as fossils is an extremely rare occurrence. Because of the infrequency of fossil preservation, fossils--particularly vertebrate fossils--are considered to be nonrenewable resources. Because of their rarity, and because of the scientific information they can provide, fossils are highly significant records of ancient life. They can provide information about the interrelationships of living organisms, their ancestry, their development and change through time, and their former distribution. Progressive morphologic changes observed in fossil lineages may provide critical information on the evolutionary process itself--that is, the ways in which new species arise and adapt to changing environmental circumstances. Fossils can also serve as important guides to the ages of the rocks and sediments in which they are contained, and may prove useful in determining the temporal relationships of rock deposits from one area to another and the timing of geologic events. Time scales established by fossils provide chronologic frameworks for geologic studies of all kinds.

2.2 DETERMINATIONS OF ROCK UNIT SENSITIVITY

Sedimentary units that are paleontologically sensitive are those units with a high potential for containing significant paleontologic resources--that is, rock units within which vertebrate fossils or significant invertebrate fossils have been determined by previous studies to be present or likely to be present. These units include, but are not limited to, sedimentary formations that contain significant paleontologic resources anywhere within their geographical extent, as well as sedimentary rock units temporally or lithologically suitable for the preservation of fossils. Determinations of paleontologic sensitivity must therefore consider not only the potential for yielding abundant vertebrate fossils but also the potential for production of a few significant fossils, large or small, vertebrate or invertebrate, that may provide new and significant taxonomic, phylogenetic, and/or stratigraphic data. Areas that may contain datable organic remains older than Recent and areas that may contain unique new vertebrate deposits, traces, and/or trackways must also be considered paleontologically sensitive.

2.2.1 Invertebrate Fossils

Generally, invertebrate fossils recovered from marine sediments are often widely distributed throughout a given outcrop or formation, are found in predictable locations, and are both abundant and well-preserved. In fact, many invertebrate fossils -- particularly marine invertebrate fossils --

can sometimes number in the millions, and can be exposed over miles of outcrop. Some invertebrate fossils are so prolific that they constitute major rock material, such as diatomaceous clay.

Given these general observations, it is clear that sedimentary exposures containing abundant, well-preserved, and extensively-distributed invertebrates -- but lacking vertebrate fossils (see below) -- are less paleontologically sensitive than limited exposures containing few fossils from a restricted depositional zone -- for example, a narrow near-shore environment or a restricted, ephemeral inland lacustrine environment. In the first case, paleontologically significant data lost to adverse impacts (be such impacts development-related or otherwise) could very likely be easily recovered from any other exposures of the impacted formation that contained similar fossil density and species diversity. In the second instance, however -- that of the limited exposures from restricted depositional environments -- adverse impacts to paleontologic resources might not be ameliorated by fossil salvage elsewhere in the formation, since the fossil abundance and species representation would likely be very different. In this second case, the sediments under consideration would be determined to be have higher paleontological sensitivity.

2.2.2 Vertebrate Fossils

Vertebrate fossils -- fossils representing animals with backbones, including mammals, birds, reptiles, amphibians and fish -- are much rarer than invertebrate fossils and are often more poorly preserved. In marine rock units, significant vertebrate fossils are generally much less common than invertebrate fossils. Paleontologic resource localities yielding vertebrate fossils are also frequently recovered from terrestrial (= non-marine) deposits; these continental deposits are generally less depositionally uniform than marine deposits, and fossilization is consequently even more infrequent. Further, in life vertebrates are often far less abundant than invertebrates (picture the difference between a herd of hundreds or possibly thousands of bison versus marine beds containing *hundreds of millions* of bivalves); the infrequency of fossilization and the vicissitudes of the many taphonomic factors involved result in vertebrate fossils being extremely rare relative to their original numbers in life. For these reasons, vertebrate fossil resources are considered to have very high paleontologic significance; geologic formations that have the potential to yield vertebrate fossil remains are therefore considered to have the greatest paleontologic significance -- and, it follows, the highest paleontologic sensitivity.

2.3 DEFINITIONS

Literature research and institutional records searches presented herein have resulted in the designation of excavation areas within the La Quinta General Plan study area as having high, low or undetermined paleontologic sensitivity. Provisions for mitigation of adverse impacts to significant nonrenewable paleontologic resources exposed during development-related construction in La Quinta are based upon these determinations of potential paleontologic sensitivity. The terms "high sensitivity," "low sensitivity" and "undetermined sensitivity" are described below.

2.3.1 High Sensitivity

Sedimentary units with a high potential for containing significant nonrenewable paleontologic resources are determined to have high paleontologic sensitivity. In these cases the sedimentary rock unit contains a high density of recorded vertebrate fossil sites, has produced vertebrate fossil remains in the near vicinity of the project, and is very likely to yield additional remains during excavation associated with project development.

2.3.2 Low Sensitivity

The rock unit contains no or very low density of recorded resource localities, has produced little or no fossil remains in the vicinity of the project, and is not likely to yield any fossil remains.

2.3.3 Undetermined Sensitivity

The rock unit has limited exposure(s) in the project area, is poorly studied, and contains no recorded paleontologic resource localities. However, in other areas, the same or a similar rock unit contains sufficient paleontologic resource localities to suggest that exposures of the unit in the project area would have at least a moderate potential for yielding fossil remains. [Note: elsewhere in Southern California, sedimentary exposures with few or no prior recorded sites have recently proven abundantly fossiliferous during paleontologic mitigation activities for other construction projects. For example, the Eastside Reservoir Project in Hemet, Riverside County, California was originally determined to have "low to moderate" sensitivity, but subsequently has yielded thousands of well-preserved fossils of terrestrial Pleistocene Epoch vertebrates (Springer and Scott 1994; Scott, 1997; Springer and others, 1998, 1999)].

3: SIGNIFICANCE OF PALEONTOLOGIC RESOURCES

3.1 DEFINING PALEONTOLOGIC SIGNIFICANCE

As stated previously, preservation of plant or animal remains as fossils is an extremely rare occurrence. Because of the infrequency of fossil preservation, fossils are considered to be nonrenewable resources. Because of their rarity, and because of the scientific information they provide, fossils can be highly significant records of ancient life. Given this, fossils can be considered to be of significant scientific interest if one or more of the following criteria apply:

1. The fossils provide data on the evolutionary relationships and developmental trends among organisms, both living and extinct;
2. The fossils provide data useful in determining the age(s) of the rock unit or sedimentary stratum, including data important in determining the depositional history of the region and the timing of geologic events therein;
3. The fossils provide data regarding the development of biological communities or interaction between paleobotanical and paleozoological biotas;
4. The fossils demonstrate unusual or spectacular circumstances in the history of life;
5. The fossils are in short supply and/or in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, and are not found in other geographic locations.

As so defined, significant paleontologic resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, uncommon, diagnostically or stratigraphically important, and/or those that add to an existing body of knowledge in specific areas--stratigraphically, taxonomically, and/or regionally. They can include fossil remains of large to very small aquatic and terrestrial vertebrates, remains of plants and animals previously not represented in certain portions of the stratigraphy, and fossils that might aid stratigraphic correlations, particularly those offering data for the interpretation of tectonic events, geomorphologic evolution, paleoclimatology, and the relationships of aquatic and terrestrial species.

Determinations of the significance of paleontologic resources can only be made by qualified, trained paleontologists familiar with the fossils under consideration. Such determinations are best advanced in the light of a well-conceived and thoroughly-defined paleontologic resource management plan. With an efficient sampling plan based upon such a mitigation program in effect, the ability of the paleontologists to recognize, recover and preserve significant paleontologic resources is greatly enhanced.

3.2 DETERMINING PALEONTOLOGIC SIGNIFICANCE

The guidelines for significance identified above (Section 3.1) all have in common one basic assumption: that the fossils in question have been identified to a reasonably precise level, preferably to the generic or the specific level. *All identifiable paleontologic resources are always potentially significant.* In general, fossils are not considered to be significant unless they can be identified with some degree of precision. It is of course true that there are exceptions to this rule; unidentifiable bones or bone fragments, for example, can be of great significance when recovered from a sedimentary unit or formation that previously had not yielded fossils, or from an area with little or no history of paleontologic sensitivity. However, questions of evolutionary relationships, age of the deposit, and so forth -- those questions that are generally employed to determine the significance of a paleontologic resource -- cannot be reasonably addressed until the fossils under study have been identified to a relatively precise degree. Viewed in this light, unidentifiable fossils or fossil fragments can be seen to have limited scientific significance.

In the context of paleontologic mitigation, detailed collection practices (i.e. academically-driven research designs where every bone and/or bone fragment is analyzed) are not feasible. Destruction of at least some paleontologic resources is an unavoidable consequence of development-related excavation. Clearly, then, the goal of the paleontologist(s) in this context is not to *eliminate* impacts to fossil resources, but rather to *mitigate* such impacts by collecting and preserving a representative sample of the entire potential assemblage. In such cases, unidentifiable bones or bone fragments are *not* considered to be potentially significant in terms of the criteria presented above (Section 3.1), since identification is usually an essential prerequisite to determining significance--and there is little chance of ever supplementing these specimens with their missing portions or advancing more detailed identifications at some future date. Further, isolated fragments cannot be placed in a sufficiently-detailed three-dimensional context with their missing portions to enable taphonomic data to be advanced with any reliability.

For these reasons, nondiagnostic bones or unidentifiable bone fragments of extinct animals identified from within the boundaries of the La Quinta General Plan study area are determined to be scientifically significant only in a limited sense. In general, where exposed such elements will be employed by field monitors as indicating sediments or outcrops that *demonstrably* contain fossil resources; these areas will be examined and test-sampled to determine the presence of more complete--and therefore more significant--paleontologic resources. Microfossils are an evident exception to this provision; these elements -- generally not visible to the naked eye in the field -- are obtained through recovery of bulk samples of fossiliferous sediments that are washed and processed in the laboratory. Some unidentifiable microfossil remains are an unavoidable circumstance of this collection procedure (although most fossils recovered in this manner are readily identifiable).

Regarding those fossil remains identified from the La Quinta General Plan study area that *are* identifiable, it is important to reiterate that *all* identifiable paleontologic resources are *always* potentially significant. This being the case, the question of determining potential significance thus

becomes one of *where* the identifications of the resource(s) are made--in the field, before physical recovery of the resource, or in the laboratory subsequent to recovery and preparation. In some rare cases, accurate identifications of distinctive fossil elements to the genus or species level -- and subsequent determinations of significance -- *are* possible in the field. In most cases, however, accurate genus- or species-level identifications of megafaunal remains are not possible in the field for the following reasons: 1.) the resource(s) are generally not sufficiently well-exposed and visible to permit accurate field identification; 2.) the resource(s) have generally suffered damage from equipment activity, which makes field identification(s) much more difficult; 3.) many bones of comparably-sized animals (for example, limb bones and vertebrae of camels and horses) are very similar in overall appearance, and are difficult to discriminate without the aid of a well-provisioned comparative osteological collection; and 4.) in the context of an excavation that is proceeding according to a defined schedule, precise identification in the field is neither efficient nor cost effective. Microfaunal remains offer an additional challenge, as these elements are generally not visible to the naked eye in the field; rather, they are recovered in the laboratory through processing of bulk samples of fossiliferous sediments.

Given the above, paleontologic field monitors are primarily trained and responsible for the collection of resources that exhibit distinctive features such as articular surfaces, bony spines, or prominent bony ridges that will enable detailed identifications to be made later, in the laboratory. Resources that do not appear to be *potentially* diagnostic in this manner are generally not collected, although their presence in the field may be recorded in field notes.

Any of the fossil resources that appear in the field to be diagnostic are *potentially* significant in that they could provide data crucial to resolving any number of research questions under consideration by paleontologic investigators -- both presently and in the future. Since this significance in most cases cannot be accurately (or cost-effectively) determined prior to recovery of the resource(s), it is most reasonable and efficient to recover *all* diagnostic or potentially-diagnostic resources as they are exposed with the aim that these resources will, utilizing any number of techniques, be later demonstrated to be scientifically significant.

The resolution of specific questions or issues (as outlined in the significance criteria presented above) can be attempted given certain volumes of certain types or kinds of fossil remains. However, while estimates of the sufficiency of data -- that is, the number of specimens required to properly address a given question or issue -- can be advanced *a priori*, such estimates should by no means be considered final. The acquisition of a quantity of specimens sufficient to address a given research question does not imply that no more specimens of a similar nature need to be collected. In most cases, the recovery of minimally-sufficient numbers of specimens does not imply that "additional" remains are not significant. Rather, estimates of sufficiency should be employed only to determine that it has become possible to *begin* to address a particular question. Nor can such estimates be treated in isolation, without also considering estimates of "sufficiency of data" necessary for the resolution of other paleontologic questions.

4: GEOLOGIC / PALEONTOLOGIC BACKGROUND

4.1 INTRODUCTION

This section of the PRMP describes the geology and paleontology of the La Quinta General Plan study area, in order to provide a context for understanding the types, nature, and scientific significance of the paleontologic resources present within this region. The nature, age, and preservation of paleontologic resources presumed to be present in the subsurface will be variable, given that different rock units are exposed within the boundaries of the study area.

4.2 CHARACTERISTICS OF THE STUDY REGION

4.2.1 Geologic Background

The study area lies within the Salton Trough, a northward extension of the Gulf of California (McKibben, 1993). The Salton Trough lies below sea level, and is an active continental rift underlain by the landward extension of the East Pacific Rise; it is surrounded on three sides by mountains and bounded to the southeast by the Colorado River delta. Since the beginning of the Holocene Epoch [$\pm$ 11,000 years before present (ybp)], the Colorado River delta has blocked marine water from entering the Salton Trough from the Gulf of California. Freshwater lakes have existed intermittently in the deeper parts of the basin that developed landward of the Colorado River delta (Van de Kamp, 1973; Waters, 1983; Maloney, 1986; Whistler and others, 1995).

Previous geologic mapping of the La Quinta General Plan study area by Rogers (1965) indicates that five (5) rock units crop out within the boundaries of the La Quinta General Plan study area. These rock units and their paleontologic sensitivity are described subsequently.

4.2.1.1 Mesozoic granitics

Granitic rocks exposed along the western border of La Quinta and in the hills near Lake Cahuilla County Park in the south-central portion of the study area have low potential to contain significant nonrenewable paleontologic resources.

4.2.1.2 Pleistocene older alluvium / terrace deposits

Pockets of alluvial sediments in the southwestern portion of the study area, and downslope of the southern flanks of La Quinta Peak, are mapped (Rogers, 1965) as Pleistocene older alluvium. Further, Pleistocene terrace deposits are also present in the southwestern portion of the property (Rogers, 1965). Lithologically similar sediments of Pleistocene age at or near the surface have been documented to have high paleontologic sensitivity throughout southern California. Fossil

faunas have been documented to occur in the near-surface in Pleistocene sediments in Chino Hills, Jurupa, Rancho Cucamonga, Fontana, Riverside, and other areas within the northern margin of the Peninsular Range Province (Reynolds and Reynolds, 1991). At depths of 5 to 15 feet below the surface, Pleistocene fossils have been recovered from western San Bernardino County near Jurupa as well as near Highway 71 in Chino. Pleistocene deposits in the Cajon Valley have also been suggested (Woodburne, 1991) to contain fossil resources. Fossils recovered from these areas have included *Mammuthus* sp. (mammoth), *Paramylodon harlani* (sloth), *Camelops* sp. (camel), *Bison* sp. cf. *B. antiquus* (bison), *Equus* sp. (horse), and *Odocoileus* sp. (deer).

Recent work in the Diamond and Domenigoni Valleys, four miles southwest of Hemet in Riverside County, has yielded a diverse and exceedingly well-preserved late Pleistocene fauna from Pleistocene older alluvial sediments (Springer and Scott, 1994; Pajak and others, 1996; Scott, 1997; Springer and others, 1998, 1999). Taxa identified from this region include two kinds of ground sloth (*Megalonyx jeffersoni* and *Paramylodon harlani*), dire wolf (*Canis dirus*), sabre-toothed cat (*Smilodon fatalis*), extinct North American lion (*Panthera atrox*), American mastodon (*Mammot americanum*), Columbian mammoth (*Mammuthus columbi*), two species of horse (*Equus "occidentalis"* and *Equus conversidens*), peccary (*Platygonus compressus*), large camel (*Camelops hesternus*), and two species of bison (*Bison antiquus* and *Bison ?latifrons*). This fauna, too, occurs in the near-surface in alluvium similar to that mapped as present in the La Quinta area.

A review of the Regional Paleontologic Locality Inventory (RPLI) was conducted by Julie A. Scrivner, Laboratory Aide, and Eric Scott, Curator of Paleontology of the Section of Geological Sciences, SBCM. This review indicated that no paleontologic resources localities are recorded from Pleistocene sediments within the boundaries of the La Quinta General Plan study area. However, locality SBCM 05.008.001 is recorded from approximately three (3) miles northeast of the northern limits of the La Quinta General Plan study area, along the southern margin of the Indio Hills; this locality yielded fossil remains of an extinct camel from exposures of the Palm Springs Formation (Rymer, 1990). Additionally, localities SBCM 05.009.001 - 05.009.006 are recorded within 2 - 3 miles east of the southeast portion of the La Quinta General Plan study area; these localities in the Mecca Hills yielded tusk fragments, bivalves, and animal trackways from the Palm Springs Formation. This formation predates the Pleistocene older alluvium exposed in the La Quinta General Plan study area; a fossil skull of the extinct horse *Equus "bautistensis"* [= *Equus scotti*; see Scott (1998)] reported from this formation in the Indio Hills suggests an early to middle Pleistocene age for sediments in this region. The Palm Springs Formation is also highly fossiliferous within the boundaries of the Anza-Borrego Desert State Park (ABDSP), from which fossils of the extinct zebra-like horse *Equus enormis* [possibly also synonymous with, or at least closely related to, *Equus scotti* (Scott, 1998)] have recently been described (Downs and Miller, 1994; Scott, 1998). The Palm Springs Formation is overlain by sediments of the informally-named Ocotillo Formation in the ABDSP region; this formation has yielded numerous fossils of extinct mammoths, mastodons, horses, camels and carnivores (Remeika, 1992; Remeika and Jefferson, 1995). The Ocotillo Formation likely equates with Pleistocene older alluvial sediments mapped within the La Quinta General Plan study area; this inferred congruence reinforces the interpretation of high paleontologic sensitivity for these exposures in the La Quinta region.

4.2.1.3 "Lake Cahuilla beds"

Geologic mapping of the La Quinta region (Rogers, 1965) indicates that much of the area is underlain by flat-lying lacustrine (= lake) and fluvial (= river) sedimentary strata. These strata were deposited below the 12 meter elevation of the high shoreline of ancient Lake Cahuilla, which is believed to have existed intermittently from 400 years ago to as much as 6,000 years ago (Van de Kamp, 1973; Waters, 1983; Whistler and others, 1995). Lacustrine sediments have been deposited during each of at least seven high stands of Lake Cahuilla, each high stand resulting from flooding of the Salton Trough by inflow from the Colorado River (Waters, 1983). Fluvial sediments in the section were laid down during the intervening lake low stands, when the lake bed was dry. These alternating lacustrine and fluvial sediments, referred to herein as the "Lake Cahuilla beds," have previously yielded fossil remains representing a diversity of freshwater diatoms, land plants, sponges, ostracods, molluscs, fish, and small terrestrial vertebrates (Table 1). Deposits of tufa are also recorded from the shoreline of ancient Lake Cahuilla, along the rocks west of Jefferson Avenue and in the Lake Cahuilla County Park region. Tufa is a carbonate coating on the rocks which indicates calcium carbonate deposition beneath the surface of a lake followed by a period of drying and/or areal exposure. The presence of tufa along the shoreline of ancient Lake Cahuilla suggests that these rocks were once located below the surface of a lake (as also evidenced by the green lacustrine clays) and subsequently exposed to the open air, presumably when the lake dried.

Studies of the Holocene history of ancient Lake Cahuilla have resulted in discordant interpretations of the prehistoric sequence of infilling and drying. Wilke (1976) generated radiocarbon (^{14}C) dates from archaeological specimens collected from the "Lake Cahuilla beds" to describe a sequence of flooding and drying for the region; this sequence was disputed by Waters (1983), who challenged Wilke's (1976) radiocarbon dates and obtained new dates of his own that were decidedly at variance with those of Wilke (1976) (Langenwalter, 1990). Given the limited number of dates generated by these two studies, and the wide regional application of such pertinent data to advancing an understanding of the development and peopling of ancient Lake Cahuilla, it is clear that additional invertebrate and vertebrate fossils from the "Lake Cahuilla beds" would be critical to this endeavor. This highlights the scientific significance of the Lake Cahuilla fossils.

Recent paleontologic studies based upon two test trenches in conjunction with paleontologic mitigation resulted in the identification of a succession of interbedded lacustrine and thinly-bedded fluvial sediments (Whistler and others, 1995). Both of these lithologies were abundantly fossiliferous; the lacustrine units in particular yielded diverse small vertebrates including fish, lizards, snakes, birds, rabbits and rodents (Table 1). A fossil tooth of a bighorn sheep was also recovered in the La Quinta region, although it was located outside the two test trenches. Additionally, fossils of diatoms, ostracods and molluscs were recovered from the excavation; analysis of these fossils suggested that fresh water was present during the lacustrine intervals (Whistler and others, 1995). The fauna recovered included small-bodied species indicative of both sandy and rocky, brush-covered desert habitats (Table 1). No vertebrates typical of wetter or aquatic habitats were recovered, which suggests that flooding of the Salton Trough in prehistoric

TABLE 1

Composite Faunal List, "Lake Cahuilla beds," Coachella Valley, California
[taxonomy follows Carroll (1988), Nowak (1991), and Whistler and others (1995)]

DIATOMS

<i>Campylodiscus ?clypeus</i>	diatom
<i>Cocconeis placentula</i>	diatom
<i>Cyclotella ?kuetzingiana</i>	diatom
<i>Epithemia argus</i>	diatom
<i>Epithemia turgida</i>	diatom
<i>Hantzschia ?taenia</i>	diatom
<i>Mastogloia elliptica</i>	diatom
<i>Navicula clementis</i>	diatom
<i>Navicula palpebralis</i>	diatom
<i>Navicula ?ergadensis</i>	diatom
<i>Nitzschia ?etchequinia</i>	diatom
<i>Nitzschia ?granulata</i>	diatom
<i>Pinnularia viridis</i>	diatom
<i>Rhopalodia gibba</i>	diatom
<i>Surirella striatula</i>	diatom
<i>Synedra ?ulna</i>	diatom
<i>Terpsinoe musica</i>	diatom
<i>Tetracyclus lacustris</i>	diatom

LAND PLANTS

<i>Selaginella sinuities</i>	club-moss
Polypodiaceae	fern
<i>Pinus</i> sp.	pine
Betulaceae	alder or birch
<i>?Ceanothus</i> sp.	possible mountain lilac
Chenopodiaceae	saltbush
Onagraceae	evening primrose
<i>Quercus</i> sp.	oak
Compositae	ragweed and/or sunflower

PORIFERA

	sponges
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MOLLUSCA

	molluscs
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BIVALVES

	clams
<i>Anodonta californiensis</i>	California floater
<i>Anodonta dejecta</i>	floaters clam
<i>Pisidium ?casertanum</i>	pea clam
<i>Sphaerium striatum</i>	clam

GASTROPODS

	snails
<i>Ammicola longinqua</i>	dusky snail
<i>Ferrisia ?walkerii</i>	cloche ancyloid
<i>Flummicola</i> sp.	pebble snail
<i>Gyraulus parvus</i>	ash gyro
<i>Helisoma trivolvis</i>	rams horn
<i>Physella ampullacea</i>	paper physa

GASTROPODS (continued)	
<i>Physella concolor</i>	physa
<i>Planorbella tenuis</i>	freshwater snail
<i>Physella humerosa</i>	corkscrew physa
<i>Tryonia protea</i>	desert tryonia
<i>Fossaria</i> sp. cf. <i>F. parva</i>	freshwater snail
<i>Acetocina anomala</i>	marine snail
CRUSTACEA	crustaceans
OSTRACODA	ostracodes
<i>Cypridopsis vidua</i>	ostracode
<i>Cyprinotus torosa</i>	ostracode
<i>Limnocythere ceriotuberosa</i>	ostracode
OSTEICHTHYES	bony fish
CYPRINIDAE	minnows
<i>?Cyprinodon macularius</i>	possible desert pupfish
<i>Gila elegans</i>	bonytail chub
CATOSTOMIDAE	suckers
<i>Xyrauchen texanus</i>	razorback sucker
AMPHIBIA	amphibians
<i>Rana pipiens</i>	leopard frog
REPTILIA	reptiles
SQUAMATA	
IGUANIDAE	iguanaid lizards
<i>Phrynosoma platyrhinos</i>	desert horned lizard
<i>Sceloporus magister</i>	desert spiny lizard
<i>Uma inornata</i>	Coachella Valley fringe-toed lizard
<i>Urosaurus graciosus</i>	long-tailed brush lizard
COLUBRIDAE	colubrid snakes
<i>Chionactis occipitalis</i>	western shovel-nosed snake
<i>Hypsiglena torquata</i>	night snake
<i>Pituophis melanoleucus</i>	gopher snake
<i>Sonora semiannulata</i>	western ground snake
CROTALIDAE	rattlesnakes
<i>Crotalus cerastes</i>	sidewinder
<i>Crotalus</i> sp. (large)	large rattlesnake
AVES	birds
PASSERIFORMES	advanced land birds
PELECANIFORMES	pelicans, cormorants
<i>Pelecanus erythrorhynchos</i>	white pelican
<i>Phalacrocorax</i> sp.	cormorant
MAMMALIA	mammals
LAGOMORPHA	
LEPORIDAE	rabbits
<i>Sylvilagus</i> sp.	cottontailed rabbit

RODENTIA	rodents
SCIURIDAE	
<i>Ammospermophilus leucurus</i>	antelope ground squirrel
GEOMYIDAE	
<i>Thomomys</i> sp.	pocket gopher
HETEROMYIDAE	
<i>Perognathus longimembris</i>	pocket mouse
<i>?Dipodomys</i> sp.	possible kangaroo rat
CRICETIDAE	
<i>Neotoma lepida</i>	desert wood rat
<i>Peromyscus</i> sp.	deer mouse
PERISSODACTYLA	odd-toed hoofed mammals
EQUIDAE	
<i>?Equus</i> sp. (small)	possible extinct small horse
ARTIODACTYLA	even-toed hoofed mammals
CERVIDAE	
<i>Odocoileus</i> sp.	deer
BOVIDAE	
<i>Ovis canadensis</i>	bighorn sheep

times occurred rapidly – there was apparently insufficient time for wet-habitat taxa to migrate from the Colorado River to Lake Cahuilla before the lake evaporated (Whistler and others, 1995).

Although fossils recovered from the Lake Cahuilla beds are younger than 10,000 years old, and are therefore geologically relatively recent, nevertheless they are scientifically significant in that they have the potential to provide valuable data on prehistoric ecological conditions and geomorphic development in the area [as demonstrated by the above analyses of Whistler and others (1995)]. The value of these fossils to advancing our understanding of regional prehistory conforms with the recommendations of CEQA requiring mitigation of impacts to resources considered to be “historically significant” if they have yielded or may be likely to yield information important in prehistory. As a result, the Lake Cahuilla beds are determined to have high paleontologic sensitivity, and to have potential to contain nonrenewable paleontologic resources that are subject to adverse impact from development-related excavation.

The review of the RPLI indicated that six (6) paleontologic localities are recorded from within the boundaries of the La Quinta General Plan study area in exposures of the “Lake Cahuilla beds.” Two (2) of these localities, LACMIP 16830 and 16831, are invertebrate localities; the remaining four localities (LACMVP 6252, 6253, 6255 and 6256) are vertebrate localities. Collectively these localities yielded the fish, lizards, snakes, birds, rabbits, rodents, diatoms, ostracods and molluscs reported by Whistler and others (1995) (Table 1). Additionally, the RPLI records several paleontologic resource localities within four (4) miles due east of the northern portion of the La Quinta General Plan study area; these localities (SBCM 05.008.007 - 05.008.015) yielded fossil remains of freshwater bivalves and snails representing species that are still extant in the Colorado Desert of southeastern California and western Arizona (Whistler and others, 1995). These species presently occupy fresh-water habitats with muddy to sandy substrates in relatively shallow (<

2 m deep) and comparatively permanent bodies of water with rooted vegetation and debris. Two terrestrial vertebrate taxa were also recorded in the RPLI from these localities: *Thomomys* sp. (pocket gopher) and *Odocoileus* sp. (deer). The presence of *Thomomys* is significant in that it suggests the presence of a wet or aquatic habitat; pocket gophers prefer moist, warm substrates in which they can burrow (Nowak, 1991). Previous studies of the "Lake Cahuilla beds" near La Quinta (Whistler and others, 1995) noted the absence of *Thomomys* from an otherwise abundant microfauna, and suggested that this absence – along with the absence of amphibians, aquatic reptiles, waterfowl and other small mammals preferring a moist substrate – indicated that Lake Cahuilla "was not a large persistent body of water" (Whistler and others, 1995, p. 117). The recovery of *Thomomys* from the "Lake Cahuilla beds" does not necessarily refute this contention, but does demonstrate that the recovery of additional fossils from these sediments may help to further refine our understanding of the history of the ancient lake.

The identification of a fossil vertebra of *Odocoileus* (deer) from the "Lake Cahuilla beds" (Table 1) is also of interest in that this taxon has not previously been reported from the fossil record of the region. This find is a significant addition to the fossil fauna of the region as it represents a previously-unreported and extremely rare species. Once again, the importance of preserving fossil resources preserved in the subsurface in and around ancient Lake Cahuilla cannot be overemphasized.

4.2.1.4 Recent alluvium

Alluvial deposits of presumed Recent age are present in the Cove area, along the western boundary of the study area. Lithologically-similar alluvium has been observed southwest of Lake Cahuilla County Park. These deposits consist of alluvium deposited during Recent times as runoff from the nearby granitic hills, and are considered to be too young to be likely to contain significant nonrenewable paleontologic resources. However, it is possible that these Recent sediments overlie older alluvium of Pleistocene age; such sediments, if present at depth, would have high potential to contain significant nonrenewable paleontologic resources.

4.2.1.5 Recent dune sand

Sand dune deposits of Recent age are present in the northern portion of the study area, generally north of Avenue 50. These dunes have resulted from the persistent high winds active in this area. The dune sands in the La Quinta are too recent to contain significant nonrenewable paleontologic resources, and therefore have low paleontologic sensitivity. However, as with the Recent alluvium described previously, it is possible that the Recent dune sands may overlie older alluvium of Pleistocene age. Such Ice Age sediments, if present at depth, would have high potential to contain significant nonrenewable paleontologic resources.

5: RESEARCH QUESTIONS

5.1 INTRODUCTION

The significance of paleontologic resources can be determined by placing the recovered fossils and their associated contextual data in a pertinent research framework. Given the limited number of paleontologically sensitive formations that might be impacted by development in the La Quinta General Plan study area, a broad-based, initial research framework can be established that presents questions of scientific interest that can be asked of any sizeable paleontologic assemblage.

5.2 CATEGORIES FOR POTENTIAL RESEARCH

The criteria advanced for interpretations of paleontologic resource significance constitute the foundation for any research design. Since a fossil is not generally considered to be significant unless it corresponds to one or more of these classes, any research program must be designed to reflect this fact. Research questions that do not incorporate one or more of the significance criteria should not be considered or included in the research design.

As has been previously stated, resource significance can be determined by examining the recovered fossils in light of the following criteria:

1. The resources provide data on the evolutionary relationships and developmental trends among organisms, both living and extinct;
2. The resources provide data useful in determining the age(s) of the rock unit or sedimentary stratum, including data important in determining the depositional history of the region and the timing of geologic events therein;
3. The resources provide data regarding development of paleobiological communities and/or the interaction between paleobotanical and paleozoological biotas;
4. The resources represent unusual or spectacular circumstances in the history of life;
5. The resources are in short supply and/or in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, and are not found in other geographic locations.

Based upon these criteria, then, several broad and basic categories for potential research are presented here as being of significant scientific interest, as well as being pertinent to the geologic and paleobiologic history of the fossil strata that could be affected during development-related

construction in La Quinta. These categories do not in and of themselves comprise a complete research framework; rather, they provide a starting point from which to address the significance of any fossil assemblage(s) identified from within the boundaries of the La Quinta General Plan study area. These categories include:

- Faunal composition of the assemblage
- Age(s) of the assemblage
- Depositional environment of the sedimentary sequence
- Taphonomic factors influencing the assemblage
- Population structure/dynamics of individual species within the assemblage
- Paleoenvironment of the region at the time(s) of deposition
- Questions specific to individual species represented within the assemblage

6: PALEONTOLOGIC RESOURCES MONITORING PLAN

6.1 MITIGATION MEASURES

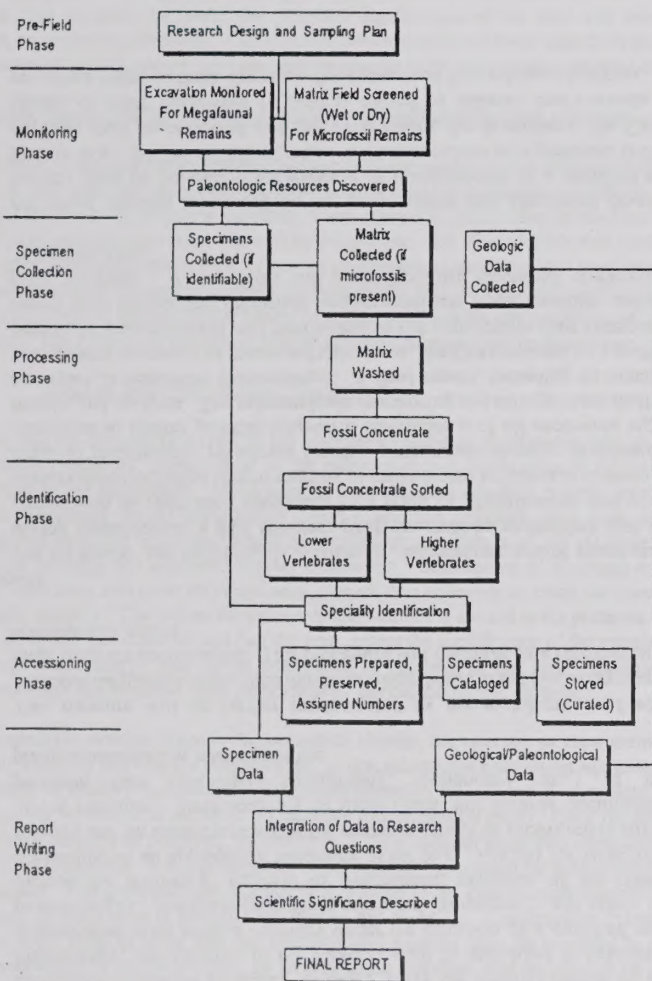
The following are mitigation guidelines to be employed on development projects conducted within the boundaries of the La Quinta General Plan study area. These measures are commensurate with those utilized throughout southern California for numerous projects on public and private land. The mitigation measures will effectively mitigate adverse impacts to paleontologic resources to less than significant levels. These measures are summarized below as Paleontology Actions (PA) 1 through 5. The specifics of the mitigation efforts, including monitoring of excavation, curation, preparation of the final report and storage of specimens, are presented as a flow chart (Figure 1) and detailed subsequently (Section 7).

Prior to construction

PA-1 An orientation workshop shall be prepared and presented by a professional vertebrate paleontologist to explain paleontologic mitigation guidelines and procedures to the contractor and construction workers. This workshop can be presented in conjunction with any pre-grade meetings conducted prior to excavation. The workshop will review the Paleontologic Resources Mitigation Plan (PRMP), and will endeavor to explain the nature, appearance and importance of fossil vertebrates, invertebrates and plants. The responsibilities of construction personnel in a paleontologic mitigation context will also be detailed. Construction workers shall not collect any fossils found during construction before their significance can be assessed by a qualified paleontologist. An outline for the paleontology workshop is provided in Appendix A (attached). A document entitled "Checklist for Paleontologic Resources and Guidelines for Construction Personnel" has also been prepared for this task and is also provided in Appendix A.

All construction inspectors and environmental monitors shall be briefed on the locations of high sensitivity areas for paleontologic resources as part of a training program including information on all aspects of the project. This training program will cover items addressed in the paleontology workshop, but more training and detail will be included. It will be stated during the paleontology briefing that it is unlawful for construction inspectors or environmental monitors to collect fossils from the grade separation or any other construction area during construction, as these fossils belong to the public and will be placed in a recognized curation facility such as a museum or university, where they will be treated, stored, maintained and made available for scientific study.

FIGURE 1
Mitigation Program Flow Chart



During construction

PA-2

If paleontologic resources are found at any time during construction, work shall be redirected to another area nearby so that the scientific significance of the find may be assessed. Construction monitors shall notify the onsite construction monitoring coordinator. As part of the monitoring procedure, a qualified professional vertebrate paleontologist with regional experience shall then assess the significance of the find and recommend additional mitigation measures, as necessary. The paleontologist shall be retained to perform inspection of the excavation and to salvage exposed fossils. A standard sample [2,724 kg (= 6,000 lbs or 2.4 cubic meters)] of fossiliferous sediment may be collected for recovery and identification of microvertebrates (rodents, birds, rabbits). Monitors shall also determine whether the fossil is part of an archaeological deposit; if so, it shall then be considered a cultural resource discovery and treated according to the procedures specified in the Cultural Resource Monitoring Plan prepared prior to construction.

This measure will be implemented by requiring paleontologic monitoring in rock units that have been designated as having high potential to contain paleontologic resources. The paleontologic monitoring plan calls for the placement of one paleontologic monitor at each construction location in all areas of high paleontologic sensitivity. This monitor will be a qualified vertebrate paleontologist with regional experience. The paleontologic monitor is empowered to determine significance in the field and recover the data immediately.

If fossils are discovered by environmental monitors and/or construction personnel in areas of low paleontologic sensitivity, work shall be redirected to another area nearby so that the scientific significance of the find may be assessed. Construction crew members should proceed as outlined in Section 6.3.1, below.

Large fossils exposed by excavation will be expeditiously jacketed with plaster bandages or strips of burlap saturated with plaster, then removed and returned to the paleontology laboratory for preparation, identification and permanent storage. Standard samples [2,724 kg (= 6,000 lbs or 2.4 cubic meters)] of sediment, as modified from Wolff (1975)] of fossiliferous sediments will be salvaged from designated microfossil sampling localities. For this project, the not-to-exceed quantity is one standard sample [2,724 kg (= 6,000 lbs)] of sediment per fossiliferous member or formation that has been demonstrated to produce vertebrate fossils. There are two such rock units that may potentially be encountered during construction within the boundaries of the La Quinta study area: Pleistocene older alluvium and the "Lake Cahuilla beds." Up to two standard samples of fossiliferous matrix may therefore be obtained and processed from these units. This sedimentary matrix will be stockpiled on-site, and subsequently processed; recovered specimens will be identified and curated.

PA-3

The preservation of significant fossils (if found during construction) by removal will occur as described in PA-3, unless it is not feasible. Due to the potential for rapid deterioration of exposed surface fossils, preservation by avoidance is not an acceptable mitigation measure. In cases where the fossil(s) cannot be removed immediately, the location of the fossil(s) shall be stabilized to prevent further deterioration prior to data recovery under the direction of a qualified vertebrate paleontologist. Stabilization in these cases can (as necessary and safely feasible) include the following: removal of overburden; exposure of the resource(s); application of an appropriate hardening agent (e.g., Glyptal for large vertebrate fossils); and (in those cases where the resource cannot be recovered at all) reburial of the resource. Data recovery in these cases will include documentation of pertinent data (lithology, stratigraphy, taphonomy, etc.) as well as photodocumentation where possible.

This measure will be further implemented by the mobilization of additional professional paleontologic field monitors within hours of the discovery if unusually large finds are encountered. This procedure will optimize data recovery and avoid construction delays.

After construction

PA-4

For all macro- and microfossils (vertebrate, invertebrate and/or plant) recovered during construction, a data recovery program shall be undertaken that includes preparation of recovered specimens to a point of identification and permanent preservation (including screen washing of fossiliferous sediment samples to recover small to microscopic vertebrate fossils); preparation of large vertebrate fossils recovered in plaster jackets; long-term stabilization of all recovered significant fossils; and analysis. The paleontologic monitoring and salvage team shall include an expert in vertebrate paleontology. A final report, including an itemized and accessioned inventory of recovered specimens, shall be prepared by a professional vertebrate paleontologist and distributed to the appropriate lead agencies. This report shall include any important megainvertebrate fossil localities and/or fossil plant localities. These items and procedures are discussed elsewhere under "Curation Plan."

PA-5

All fossil remains recovered during construction and associated development activity shall be curated at the expense of the developer at a qualified research facility (e.g., SBCM or NHMLAC). A Memorandum of Agreement (MOA) for curation shall be reviewed and approved among the developers, the City of La Quinta or other landowner (if land is owned by others), and curation facility providing rights to these materials for guaranteed future research access.

6.2 FIELD MONITORING PROCEDURES

The SBCM has established the following procedures and guidelines to ensure the proper protection, salvage and recovery of paleontologic resources as they are encountered. Procedures for monitoring and fossil recovery by qualified paleontologic field monitors are addressed as well as guidelines for construction personnel and excavation contractors who may encounter paleontologic resources in the course of their activities during excavation.

A qualified, professional vertebrate paleontologist thoroughly trained in paleontologic salvage guidelines and techniques will be on-site during all excavation activities conducted in rock units that have been identified to have high paleontologic sensitivity. These monitors will be equipped to efficiently salvage fossils as they are unearthed in order to avoid excavation/construction delays.

Paleontologic monitors and/or their necessary equipment (including trucks) will be working in the area(s) of active excavation. Construction equipment operators will be instructed to give these monitors a wide berth (≈ six meters/twenty feet at least) for safety reasons. The paleontologic monitors will be prepared to remove samples of sediments that are likely to contain the remains of small to microscopic fossil invertebrates and vertebrates; the monitors may enlist the assistance of construction personnel and equipment in this undertaking, in order to avoid delays in excavation activities. The monitors will be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens.

The paleontologic monitors will be provided with appropriate safety materials (hard hats, orange vests with reflective yellow tape, steel-toed boots, et cetera) in order to promote safety and to facilitate ease of observation by the equipment operators.

Because the monitors will be performing their duties in close proximity to the excavation equipment, they have been trained to make themselves visible to equipment operators while in the field, and will usually endeavor to make eye contact with the operators prior to entering a potentially hazardous area. They will frequently be required to operate vehicles or equipment near active excavation areas. For this reason, the operators must be alert at all times to the presence of paleontologic monitors and their equipment in the excavation area.

6.3 CONSTRUCTION PERSONNEL PROCEDURES

As addressed in the attached document, "Guidelines for Construction Personnel and Supervisors" (provided in Appendix A), crews and supervisors should be on the lookout at all times for fossils, bones, charcoal, ash or other paleontologic resources exposed during trenching and other excavation activities. Although paleontologic monitors will be present at all times during excavation in rock units with high fossil potential, onsite personnel and/or other construction contractors may provide invaluable assistance in the salvage and recovery of these resources.

Upon encountering an exposed fossil or other paleontologic resource, the paleontologic monitor(s) will stake off and flag an area of $\pm$ two (2) meters on all sides of the find, in order to alert equipment operators to the presence of a potential resource. The monitor(s) will then further expose the find in order to assess the potential significance of the find and determine the appropriate recovery requirements. Construction crews must avoid these staked off/flagged areas by a minimum of six (6) meters until the paleontologists have authorized continued excavation.

6.3.1 Fossils discovered by construction personnel during trenching activities

As stated above, a qualified paleontologic monitor will be on-site during all excavation activities conducted in rock units that have been identified to have high paleontologic sensitivity. However, it is possible that construction crew members or equipment operators may be the first individuals to observe paleontologic resources exposed by excavation. It is also possible that fossils or other resources will be encountered in areas of low or undetermined paleontologic sensitivity, at times when no paleontologic monitor is present. In these cases, *it is unlawful for construction workers and other construction contractor personnel to collect fossils from any construction area during construction.* The following guidelines are therefore to be employed in these cases.

6.3.1.1 Areas of High Paleontologic Sensitivity

In the event that the construction crew or the equipment operators suspect that they've uncovered fossils or other resources, preservation of the resource(s) and notification of the paleontologic monitor are of prime importance. Upon uncovering a potential resource in these sensitive areas, construction personnel should immediately divert excavation activities away from the potential site. Suspected resource localities should be avoided by a *minimum* of six (6) meters until the paleontologic monitor has approved further excavation. Subsequent to diverting construction equipment, operators and crew members must *immediately* endeavor to catch the attention of the paleontologic monitor. The sooner the paleontologic monitor is alerted to the presence of the find, the sooner he or she can stake off and flag the area, assess the significance of the remains, recover the resource (if necessary), and permit excavation to continue in that area. Excavation in the affected area must not continue until authorized by the paleontologic monitor.

If the paleontologic monitor is not in the immediate vicinity, the operator or crew member should immediately stake off and flag the affected area, so that subsequent excavation equipment does not further damage or destroy the resource. Equipment operators are advised to carry lathe stakes and colored flagging with them at all times, to facilitate this mitigation effort. Once the affected area is staked off and flagged (if possible), the operator or crew member must then *immediately* contact the construction inspector. It is this inspector's responsibility to contact the paleontologic monitor in this situation. The paleontologic monitor will respond to the construction inspector's request for assistance as soon as it is possible for him or her to do so. Construction crews and their supervisors must keep in mind that the paleontologic monitor may be involved in recovering resources elsewhere in the excavation, so an immediate response may not always be possible.

6.3.1.2 Areas of Low or Undetermined Paleontologic Sensitivity

In the event that fossils are exposed in sediments exposed during excavation in areas that were initially determined to have low paleontologic sensitivity, or to have undetermined sensitivity for paleontologic resources, treatment of these fossils will be the same as that established for areas of high sensitivity. The operator or crew member should immediately stake off and flag the affected area, so that subsequent excavation equipment does not further damage or destroy the resource. Equipment operators are advised to carry lathe stakes and flagging with them at all times, to facilitate this mitigation effort. Once the affected area is staked off and flagged (if possible), the operator or crew member must then *immediately* contact the construction inspector. It is the construction inspector's responsibility to contact the paleontologist in this situation. Paleontologic field monitors will respond to the construction inspector's request for assistance as soon as it is possible for them to do so.

In every case, supervisors and crew members should avoid moving or disturbing the resource(s) until the paleontologist(s) have determined the significance of the find. Again, *it is unlawful for construction workers or other construction contractor personnel to collect fossils from any construction areas during construction.* Work may not continue in the affected area until the paleontologic monitor(s) have removed the find and authorized further excavation.

6.3.2 Resources identified in spoils piles by the paleontologic monitor

Fossil resources discovered in the spoils piles by the paleontologic monitor will be flagged off and collected by the monitors for salvage and removal. Construction personnel must not back-fill exposed trenches until the stakes and flagging have been pulled by the paleontologist on site. Stakes and flagging will be removed subsequent to resource recovery, and back-filling of the trench will then be allowed to proceed.

When bulk samples of sedimentary matrix need to be recovered during excavation, the most expeditious and cost-effective manner to remove this material is to employ the construction crew members and equipment for a brief period to remove the sediment in bulk (in the case of a spoils pile, that task has already been accomplished). Exceptionally large fossils or assemblages of fossils are also most easily and economically recovered in this manner.

The paleontologic mitigation program is designed to recover not only exposed paleontologic resources, but also significant contextual data associated with these resources. For this reason, site paleontologists will often be required to stake off and flag some areas within the excavation in order to plot resource localities, measure stratigraphic sections, map fossiliferous horizons, photograph exposures, and so forth. Again, the equipment operators must avoid these staked off and flagged areas until the paleontologists have authorized continued excavation.

6.4 RECORDATION AND DOCUMENTATION OF PALEONTOLOGIC RESOURCES

All paleontologic field monitors are trained in standardized methods and procedures to ensure that data collection is equitable among all identified paleontologic resource localities. All data collection and recordation techniques, as well as standard safety equipment and safety procedures will be reviewed prior to the project start-up.

During the paleontologic mitigation monitoring program, all observed pertinent data will be recorded on waterproof field notebooks with permanent ink on-site at the time the resource has been exposed and recovered. All paleontologic field notes will be retained at the appropriate paleontologic resource repository; photocopies will be generated frequently to ensure that there are always permanent copies in the event a field notebook is lost or misplaced.

Monitors will be equipped with Brunton or equivalent compasses with built-in clinometers to permit precise elevational siting of fossil horizons; it is imperative that accurate stratigraphic information is obtained in this way. The use of the compass will allow monitors to accurately plot paleontologic resource localities on the project maps that will be provided for them.

Characterization of the sedimentary lithology is important in paleontologic studies. The character of the sediment surrounding the resources provides many clues as to the environment of deposition. Lithologic description is enhanced by the use of rock color charts to uniformly assess sediment color. Additionally, details such as grain size, shape, sorting, roundness, and sphericity of lithologic samples will be determined by the monitor in the field with a hand lens. Small samples of sediment will be collected at each resource site. Monitors will also sketch measured stratigraphic sections of the area surrounding a resource locality. Photodocumentation will be conducted where judged appropriate by the field monitor.

For taphonomic studies, magnetic north will be noted using a Brunton or equivalent compass and written on the fossil specimens (or plaster jackets that encase them) so that the original orientation of the specimen(s) in the sediment is preserved. Other taphonomic data (evidence of trampling, weathering, etc) will be noted where pertinent; however, in most cases these determinations are better performed in the laboratory.

For safety purposes, paleontologic field monitors will be equipped with hard hats, bright orange vests with a reflective coating, and steel-toed boots.

6.5 RECOVERY OF PALEONTOLOGIC RESOURCES

6.5.1 Megafaunal Sampling Plan

The distribution of large vertebrate fossils that are unearthed by the excavation equipment is herein considered random. The megafaunal sampling plan will therefore be strictly dictated by the

excavation activities planned for a given development project. The paleontologists will monitor *only* in the areas that are being excavated in rock units that have moderate to high paleontologic potential. Excavation equipment will unearth fossil resources while the paleontologic field monitor is observing the excavation; the quantity and quality (which in some cases will be diminished by the equipment) of the fossils cannot be known *a priori*. Based upon previous studies, however, it can be proposed that the potential for vertebrate fossils is high where certain lithologic units are exposed in the La Quinta General Plan study area.

As discussed above, *it is not the goal of the megafaunal sampling plan to collect all paleontologic resources that are discovered*. The paleontologic monitor determines whether the find should be collected at the time of discovery. The criteria for this task are very clear. Monitors collect only fossils possessing articulated surfaces or other diagnostic features that aid in precise identification. Bones or bone fragments of an indeterminate or unidentifiable nature are not collected, save in those areas where fossil bones have not previously been recorded. This last caveat is critical as it applies to the La Quinta General Plan, in that vertebrate megafaunal fossils have not yet been identified from within the boundaries of the study area (although they are present in lithologically-similar sediments outside but adjacent to the study area). Where a paleontologic monitor discovers a megafaunal resource locality exposed by excavation, the fossils will be expeditiously jacketed with plaster bandages or strips of burlap saturated with plaster, then removed and returned to the appropriate, professionally-recognized and accredited curatorial facility for preparation, identification and permanent storage.

6.5.2 Microfaunal Sampling Plan

The sampling of microvertebrates is critical to understanding both the temporal and the paleoecological aspects of the sediments encountered in conjunction with development. Microvertebrates (especially rodents) can be useful to paleontologists in determining the age of the sediments in which they are deposited; this relative age dating application is called biochronology. This method is ideally utilized in conjunction with methods of absolute dating such as the radiometric dating of ashes, charcoal or dating of bone collagen to obtain a clear picture of the age of the sediments. Recovery and analysis of fossil pollen can potentially enable determination of changes in plant distributions and microclimate through time.

Microfauna are also extremely useful in determining the paleoenvironment in existence at the time the sediments were deposited. Small animals such as amphibians and reptiles are very specific to certain environments (pond turtles, for instance, live near water). Amphibians in a sample are also indicative of a wet environment since they must reproduce in water. Analysis of the microfauna can therefore enable us to determine what the climate was like during the time periods that span the rock units exposed during development. Large vertebrates are less useful for paleoenvironmental analysis, due to their proclivity for traveling large distances during their lifetime; it follows, therefore, that small animals which have restricted geographic ranges would be more likely to yield environmental data.

6.5.2.1 Details of Microfaunal Sampling Plan

The microfaunal sampling plan is designed to allow for the recovery of microvertebrates at appropriate locales within the boundaries of the La Quinta study area.

The recovery of bulk samples of sediment that contain microvertebrate remains has been standardized by Wolff (1975). Standard samples of fossiliferous matrix are generally accepted to be 2,724 kg (6,000 lbs = 2.4 cubic meters) per lithologic horizon. As discussed in PA-2 above, the sampling calls for standard samples of matrix to be collected within members or formations that have proved to produce terrestrial vertebrate fossils. There are two such units expected to be impacted during development within the boundaries of the La Quinta study area. These are: Pleistocene older alluvium and the "Lake Cahuilla beds."

6.6 CURATION PLAN

Curation of fossil specimens collected during paleontologic mitigation programs conducted in the La Quinta General Plan study area includes the preparation of recovered specimens to a point of identification and permanent preservation, including screen washing of fossiliferous sediment samples to recover small to microscopic vertebrate fossils; large specimens encased in plaster jackets taken from the site will be prepared in the paleontology laboratory.

6.6.1 Processing and Curation Techniques

The curation plan calls for laboratory preparation of recovered megafaunal remains to a point of identification and permanent preservation (*not* exhibition). This preparation generally requires exposure of the recovered resource(s) by removal of the surrounding sedimentary matrix from the jacket; this matrix is saved for later microfossil processing. Once all of the matrix has been removed and the specimen has been cleaned, the fossil is hardened with Glyptal, a lacquer derivative, that has been thinned with acetone in order to enable the hardener to more fully penetrate the fossil. Glyptal may be applied several times before the fossil is deemed to be sufficiently sturdy for permanent storage. Excess plaster from the jacket is then trimmed, to reduce the amount of storage space required by the specimen.

The curation plan also includes the processing of standard samples of fossiliferous matrix. Sedimentary matrix will be water-washed through stacked sets of 20- and 30-mesh screens and sun-dried; select sediment samples may be washed through more finely-meshed screens to enable the recovery of microscopic ostracodes or fossil pollen, where appropriate. To accelerate the breakdown of fossiliferous matrix, sediments will be oven-roasted to promote drying, then re-submerged in water to facilitate disaggregation of clays and fine silts. Subsequent screen washing will remove these fine sediments and leave fossil specimens in a clean concentrate. In some cases, very indurated matrix will not break down this method. In this case, matrix is roasted in ovens

at approximately 150 degrees F and then treated with kerosene and water, which facilitates the breakdown of the clay bonds. The matrix will then be processed with a heavy liquid of a specific density that allows the fossils to float on top to separate them from the matrix. This concentrate will be visually examined--when necessary with the aid of binocular microscopes--and hand-sorted to remove fossil specimens.

The curation plan further includes sampling for fossil pollen. Diagnostic pollen has been recorded from within the boundaries of the La Quinta General Plan study area (Whistler and others, 1995), and so provisions must be made for sampling for this valuable resource. In those cases where pollen is identified from bulk samples in the field, additional sampling should be initiated where warranted in a series of more precise (e.g., 2 cm) sampling horizons; this will potentially enable determination of changes in plant distributions and microclimate through time.

Should plant macrofossils be exposed or identified during a mitigation program, such fossils should be collected and prepared to a point of identification and permanent preservation (*not* exhibition). This preparation generally requires full exposure of the recovered resource(s) by splitting of thin sedimentary layers along their bedding planes, followed by application of a hardening agent. Misting with a 10:1 water/white glue mixture is usually sufficient for preserving such fossils; application of nitrocellulose thinned with acetone is also recommended in some instances (Lepage and Basinger, 1993). In some cases, at the discretion of the Principal Investigator, select rock slabs thought to contain fossilized plant remains will be left intact for future researchers, so that these individuals will be able to split open the rock slabs themselves and observe the appearance of the fossil(s) immediately upon exposure. Fossil stromatolite samples will be preserved similarly to the plant macrofossils.

Other curatorial tasks will include the identification, curation and accessioning of all recovered specimens into the retrievable storage collections of an approved, accredited curation facility. All data pertaining to the specimens will be recorded in the collections database of the repository. Resource locality information will also be plotted on topographic maps and entered into a computerized locality database. Card stock printouts of all pertinent faunal, floral, locational, and lithologic data pertaining to each resource locality will be produced and filed. Card stock files from the locality database will also be printed and kept on file.

Following preparation, fossils will be stored in steel cabinets with steel geologic specimen trays. Accession and locality data will be written in permanent black ink on acid-free paper tags associated with each specimen; specimen identifications will be written in pencil. Accession numbers of large fossils will be written on the bone in permanent ink. Large fossils will be stored in their plaster jackets where necessary to help retain the integrity of the bone; excess plaster will be cut away prior to storage, to maximize storage space. Microfossils will be stored in glass vials with cork stoppers; extremely small specimens (e.g., ostracodes) will be placed in gelatin capsules within the glass vials. Accession data slips inside each of the glass vials will prevent inadvertent shuffling of the collection and provide a means of "earthquake-proofing" the collection. The glass

vials will be placed in cardboard jewelers boxes with their data slips, then permanently stored in the geologic specimen trays. Labels bearing accession number data shall be glued to rock slabs bearing fossil plant remains or stromatolites, in such a manner so as not to damage or obscure the fossil(s).

Specimens recovered during the course of the mitigation program will be identified by professional paleontologists who have appropriate expertise in vertebrate and invertebrate paleontology and paleobotany.

The fossils will be curated and stored and accessioned into the permanent retrievable collections of a recognized, accredited repository. All paleontologic resources will be catalogued and accessioned under a unique number, which would identify the appropriate parcel and/or development project as the source of the fossils.

A final report of methods and results of the paleontologic mitigation plan will be provided at the cessation of each mitigation program. The report will include a detailed discussion of how the research goals of the project have been met, in addition to descriptions of significant finds, discussion of the curation of the resources, and results of sampling and analysis as well as an itemized accession inventory of all specimens recovered. A discussion of the significance of each taxon discovered will be provided where feasible. All resource locality information will be presented as a confidential appendix and a printout of all locality data, as well as pull-out maps with all paleontologic resource localities plotted.

7: MITIGATION RECOMMENDATIONS BY GEOLOGIC UNIT

This section summarizes the results of the literature search and review of the Regional Paleontologic Locality Inventory (RPLI), and applies the mitigation measures described in the previous section to the potential project excavation areas according to geologic unit.

Geologic Deposits: granitic rock

Age: Mesozoic

Sensitivity: *LOW*

Description: Granitic rocks have low potential to contain paleontologic resources, and are therefore assigned low paleontologic sensitivity.

Recommendations: The "Prior to Construction" general mitigation measures should be applied to this rock unit. These measures include worker education and briefing of archaeologists and construction inspectors (PA-1). If previously-unmapped sediments having high paleontologic sensitivity (e.g., Pleistocene older alluvium, "Lake Cahuilla beds") are encountered during excavation, PA-2 through PA-5 will apply.

Geologic Deposits: older alluvium

Age: Pleistocene

Sensitivity: *HIGH*

Description: Older alluvial sediments lithologically similar to sediments throughout the Inland Empire that have previously yielded abundant late Pleistocene vertebrate fossils.

Recommendations: In areas of high sensitivity, monitoring of construction by a paleontologist (PA-2) is required. Field monitoring should be initiated full time, with the provision that -- as warranted by field examination of sediments exposed by excavation -- the field effort may be reduced to part-time monitoring or

spot-checking where feasible as the project proceeds. Sediments yielding remains of aquatic or terrestrial vertebrates will be screened in the field to determine the potential for the recovery of significant resources and the efficacy of more detailed sampling. Sediments yielding invertebrate remains will be screened in the field, and sampled only in those cases where significant data are likely to be yielded. If significant fossils are recovered, PA-3 through PA-5 will apply. The "Prior to Construction" general mitigation measures should be applied to this area of excavation, as well. These measures include worker education and briefing of archaeologists and construction inspectors (PA-1).

Geologic Deposits: "Lake Cahuilla beds"

Age: early Holocene

Sensitivity: *HIGH*

Description: Lacustrine sediments that have yielded abundant fossils dating to the early Holocene Epoch

Recommendations: In areas of high sensitivity, monitoring of construction by a paleontologist (PA-2) is required. Field monitoring should be initiated full time, with the provision that -- as warranted by field examination of sediments exposed by excavation -- the field effort may be reduced to part-time monitoring or spot-checking where feasible as the project proceeds. Sediments yielding remains of aquatic or terrestrial vertebrates will be screened in the field to determine the potential for the recovery of significant resources and the efficacy of more detailed sampling. Sediments yielding invertebrate remains will be screened in the field, and sampled only in those cases where significant data are likely to be yielded. If significant fossils are recovered, PA-3 through PA-5 will apply. The "Prior to Construction" general mitigation measures should be applied to this area of excavation, as well. These measures include worker education and briefing of archaeologists and construction inspectors (PA-1).

Geologic Deposits: Recent alluvium

Age: Recent

Sensitivity: *LOW*

Description: Recent sediments that are too young to contain significant nonrenewable paleontologic resources, and which are therefore assigned low paleontologic sensitivity.

Recommendations: The "Prior to Construction" general mitigation measures should be applied to this grade separation. These measures include worker education and briefing of archaeologists and construction inspectors (PA-1). If previously-unmapped sediments having high paleontologic sensitivity (e.g., Pleistocene older alluvium, "Lake Cahuilla beds") are encountered during excavation, PA-2 through PA-5 will apply.

Geologic Deposits: dune sand

Age: Recent

Sensitivity: *LOW*

Description: windblown dune sands that are too young to contain significant nonrenewable paleontologic resources, and which are therefore assigned low paleontologic sensitivity.

Recommendations: The "Prior to Construction" general mitigation measures should be applied to this grade separation. These measures include worker education and briefing of archaeologists and construction inspectors (PA-1). If previously-unmapped sediments having high paleontologic sensitivity (e.g., Pleistocene older alluvium, "Lake Cahuilla beds") are encountered during excavation, PA-2 through PA-5 will apply.

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Section of Geological Sciences
San Bernardino County Museum
7 October 1999

APPENDIX A

Outline of Orientation Meeting for Construction Personnel,

Checklist for Paleontologic Resources

and

Guidelines for Construction Personnel and Supervisors: Field Recovery of Paleontologic Resources, La Quinta General Plan

ORIENTATION MEETING FOR CONSTRUCTION PERSONNEL AND SUPERVISORS

FIELD RECOVERY OF PALEONTOLOGIC RESOURCES LA QUINTA GENERAL PLAN

Prepared by:

SECTION OF GEOLOGICAL SCIENCES
SAN BERNARDINO COUNTY MUSEUM

-
- I. INTRODUCTION
 - ♦ Project Location and Description
 - ♦ Scope and Purpose of Paleontologic Resource Mitigation Plan
 - What is a paleontologist?
 - What is "paleontologic mitigation?"
 - What do paleontologic monitors do?
 - II. FOSSIL RESOURCES
 - ♦ What are paleontologic resources?
 - ♦ Why are fossils important?
 - Definitions of a "significant resource"
 - ♦ How do we determine rock unit sensitivity?
 - High sensitivity
 - Low sensitivity
 - Undetermined sensitivity
 - III. PALEONTOLOGY OF THE LA QUINTA GENERAL PLAN STUDY AREA
 - ♦ Granitic rock
 - ♦ Pleistocene older alluvium / terrace deposits
 - ♦ "Lake Cahuilla beds"
 - ♦ Recent alluvium
 - ♦ Dune sands
 - IV. PALEONTOLOGIC RESOURCE MONITORING PLAN
 - ♦ Mitigation measures
 - ♦ Field monitoring procedures
 - ♦ Construction personnel procedures
 - How do I recognize fossils?
 - What do I do if I find a fossil?
 - ♦ Recovery of paleontologic resources and associated contextual data
 - Megafaunal sampling
 - Microfaunal sampling
 - V. SUMMARY

CHECKLIST FOR PALEONTOLOGIC RESOURCES
La Quinta General Plan

→ **CONSTRUCTION CREWS -- BE ALERT FOR THESE ITEMS / CONDITIONS** ←

Materials:

- ___ Bones
- ___ Plant remains (chunks of wood, branches, logs, etc.)
- ___ Charcoal
- ___ Stones that appear to have been shaped or that have an unusual shape
- ___ Any objects that appear to be unusual or out of place.

Conditions:

- ___ Ash or ash-like sediments (grey to white, very fine-grained; often powdery in texture and appearance)
- ___ lake sediments (greenish, fine-grained; silts & clays)
- ___ marine sediments (fine sands and silts)
- ___ stream or river sediments (grey to reddish gravels; water-rounded pebbles and/or cobbles)
- ___ playa sediments (red-brown, fine-grained clays and silts w/ mud cracks)
- ___ Any unusual or out-of-place sedimentary layers or strata.

IF YOU UNCOVER ANY OF THE ABOVE MATERIALS / CONDITIONS --
OR OTHER OBJECTS YOU SUSPECT MIGHT BE PALEONTOLOGIC RESOURCES:

CONTACT THE SITE PALEONTOLOGIST or
YOUR CONSTRUCTION INSPECTOR IMMEDIATELY!

GUIDELINES FOR CONSTRUCTION PERSONNEL AND SUPERVISORS:
FIELD RECOVERY OF PALEONTOLOGIC RESOURCES
LA QUINTA GENERAL PLAN

Prepared by:

SECTION OF GEOLOGICAL SCIENCES
SAN BERNARDINO COUNTY MUSEUM

Excavation conducted within the boundaries of the La Quinta General Plan study area has high potential to encounter significant nonrenewable paleontologic resources (= fossils) that are likely to be destroyed unless proper monitoring and mitigation procedures are employed. For this reason, qualified professional vertebrate paleontologists with regional experience will provide paleontologic monitoring on-site at all times during all phases of excavation in sediments that have been targeted to contain fossil resources. To aid in this endeavor, the following procedures have been formulated and established by the SBCM to instruct and assist development personnel and/or other construction contractors in the proper protection, salvage and recovery of these resources as they are encountered.

In brief, the following guidelines should be applied at all times during excavation:

- Be alert for paleontologic monitors and/or their equipment (including trucks) in the area(s) of active excavation and the along haul roads. When monitors are excavating a find, give them a wide berth (= six meters or more).
- Be alert for fossils and other significant resources (see attached checklist). *Immediately* alert the paleontologic monitors in the event that paleontologic resources are encountered. If the monitors are not in the vicinity, stake the affected area off with lathe stakes and colored flagging. *Immediately* thereafter, contact your designated construction inspector. Avoid moving or disturbing the resource(s) until the paleontologists have determined the significance of the find.
- Be alert for areas that have been flagged and/or staked off by the paleontologic monitors. Give these areas a wide berth (= six meters or more) regardless of whether or not a paleontologist is present.

FIELD PROCEDURE FOR MONITORING AND RECOVERY

Professional, qualified paleontologic field monitors will be on-site during all excavation activities conducted in potentially-fossiliferous sediments. These monitors will be equipped to salvage fossils as they are unearthed, in order to avoid excavation/construction delays. The paleontologic monitors will also be prepared to remove samples of sediments that are likely to contain the remains of small to microscopic fossil invertebrates and vertebrates; the monitors may enlist the assistance of construction personnel and equipment in this undertaking, in order to avoid delays in excavation activities. The monitors will be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens.

FIELD MONITORING

- 1.) *Construction crews and supervisors must be alert for paleontologic monitors and/or their equipment in the area(s) of active excavation.*

Paleontologic monitors will be present in the field as necessary for all trenching excavation in high potential sediments. They will be provided with appropriate safety materials (hard hats, orange vests w/ reflective yellow tape, steel-toed boots, etc.) in order to promote safety and to facilitate ease of observation by the equipment operators. The paleontologic monitors will also be provided by the developers with hand-held radios if deemed necessary to streamline communications with construction personnel.

Monitors will performing their duties in close proximity to the excavation equipment. They are trained to make themselves visible to equipment operators while in the field, and will usually endeavor to make eye contact with the operators prior to entering a potentially hazardous area. They will frequently be required to operate vehicles or equipment in the excavation or along the haul roads. For this reason, the operators must be alert at all times to the presence of paleontologic monitors and their equipment in the excavation area.

- 2.) *Construction crews and supervisors must be alert for fossils and other significant resources.*

Construction crews and supervisors should be on the lookout at all times for fossils, bones, charcoal, ash or other paleontologic resources exposed during excavations. Although paleontologic monitors will be present at all times during excavation in moderate to high potential sediments, development personnel and/or other construction contractors may provide invaluable assistance in the salvage and

recovery of these resources as they are encountered. All personnel have a responsibility to protect paleontologic resources on the project. *This is everyone's responsibility.* Be on the lookout for:

- Bones
- Plant remains (chunks of wood, branches, logs, etc.)
- Charcoal
- Ash or ash-like sediments
- Stones that appear to have been shaped
- Fossil-bearing horizons or strata (see attached checklist)

- 3.) *Construction crews must divert or stop work immediately when they encounter what they suspect to be a fossil, a group of fossils, or other paleontologic resources.*

In the event that the construction crew or the equipment operators *suspect* that they've uncovered fossils or other resources during excavation activities, they should immediately divert excavation activities away from the potential site. Suspected resource localities should be avoided by a *minimum* of six (6) meters until the paleontologic monitor has approved further excavation.

Upon uncovering a potential resource and diverting equipment, operators and crew members should then *immediately* endeavor to catch the attention of the paleontologic monitor. The sooner the monitor is alerted to the presence of the find, the sooner he or she can stake off and flag the area, assess the significance of the remains, recover the resource (if necessary), and permit excavation to continue in that area. *Excavation in the affected area will not continue until authorized by the paleontologic monitor!* Stakes and flagging will be removed subsequent to resource recovery, and excavation will then be allowed to proceed.

If the monitor is not in the vicinity, the operator or crew member should immediately stake off and flag the affected area, so that subsequent excavation equipment does not further damage or destroy the resource. (Note: Operators are advised to carry lathe stakes and flagging with them at all times, to facilitate this mitigation effort.) Once the affected area is staked off and flagged (if possible), the operator or crew member must then *immediately* contact the construction inspector. It is the construction inspector's responsibility to contact the paleontologic monitor in this situation. (Note: The nearest paleontologic monitor will respond to the supervisor's request for assistance as soon as it is possible for him or her to do so. However, the construction crews and their supervisors must keep in mind that the monitors may be involved in recovering resources elsewhere in the excavation, so an immediate response may not always be possible.)

In the event that fossils are exposed in sediments that were determined to have low paleontologic sensitivity (or to have undetermined sensitivity for paleontologic resources), the operator or crew member should immediately stake off and flag the affected area so that subsequent excavation equipment does not further damage or destroy the resource. Equipment operators are advised to carry lathe stakes and flagging with them at all times, to facilitate this mitigation effort. Once the affected area is staked off and flagged (if possible), the operator or crew member must then *immediately* contact the construction inspector. It is the construction inspector's responsibility to contact the paleontologist in this situation. Paleontologic field monitors will respond to the construction inspector's request for assistance as quickly as they possibly can.

In every case, supervisors and crew members should *avoid moving or disturbing the resource(s)* until the paleontologists have determined the significance of the find. Work should not continue in the affected area until the paleontologic monitors have removed the find and authorized continued excavation.

RESOURCE RECOVERY

- 1.) *Construction crews and supervisors must be alert for areas that have been flagged and/or staked off by the paleontologic monitor(s).*

Upon encountering an exposed fossil or other paleontologic resource, the monitor(s) will stake off and flag an area of $\pm$ two (2) meters on all sides of the find, in order to alert equipment operators to the presence of a potential resource. The monitor(s) will then further expose the find in order to assess the potential significance of the find and determine the appropriate recovery requirements. Vertebrate fossils, plant fossils and representative samples of vertebrate and invertebrate fossil resources will be collected and preserved in this manner. Construction crews must avoid all such staked off/flagged areas by a minimum of six (6) meters until the paleontologists have authorized continued excavation.

- 2.) *Construction crews and supervisors may be required to assist paleontologic personnel in the recovery of fossiliferous sediments and/or of unusually large or abundant resources.*

When bulk samples of sedimentary matrix need to be recovered during excavation for vertebrate/invertebrate microfossil sampling, the most expeditious and cost-effective manner to remove this material is to employ the construction crew members and equipment for a brief period to remove the sediment in bulk (spoils piles from the trenching facilitate this task). Exceptionally large fossils, assemblages of fossils, or fossil horizons are also most easily and economically recovered in this manner.

- 3.) *Construction crews and their supervisors must avoid disturbing areas that have been staked off for data acquisition (sediment profiles, stratigraphic studies, photodocumentation, etc.) until these areas have been cleared for further excavation by the paleontologic monitor.*

The paleontologic mitigation program is designed to recover not only exposed paleontologic resources, but also significant contextual data associated with these resources. For this reason, site paleontologists will often be required to stake off and flag some areas within the excavation in order to plot resource localities, measure stratigraphic sections, map fossiliferous horizons, photograph exposures, and so forth. Again, the equipment operators must avoid these staked off and flagged areas until the paleontologists have authorized continued excavation.

APPENDIX E

City of La Quinta Noise Element Update Technical Report La Quinta, California

Prepared by

RKJK & Associates, Inc.
1601 Dove Street, Suite 290
Newport Beach, CA 92660
September 22, 2000

CITY OF LA QUINTA NOISE ELEMENT UPDATE TECHNICAL REPORT La Quinta, California

RKJK
& ASSOCIATES INC.

September 22, 2000

Ms. Nicole Criste, AICP
TERRA NOVA PLANNING & RESEARCH
400 S. Farrell, Suite B-205
Palm Springs, CA 92262

Subject: City of La Quinta Noise Element Update Technical Report

Dear Ms. Criste:

RKJK & ASSOCIATES, INC. (RKJK) is pleased to present The Noise Element Technical Report for the City of La Quinta General Plan Update. This report documents the methods and procedures used to develop the noise element.

RKJK & Associates, INC., is pleased to assist TERRA NOVA PLANNING & RESEARCH on the City of La Quinta General Plan update noise element and look forward to working with you in the future. If you have any questions regarding the study, please do not hesitate to call at (949) 474-0809.

Sincerely,

RKJK & ASSOCIATES, INC.

Bill Lawson

Bill Lawson, AICP
Senior Planner

BL:RK:skf/11436

JN:0341-98-05

Attachments

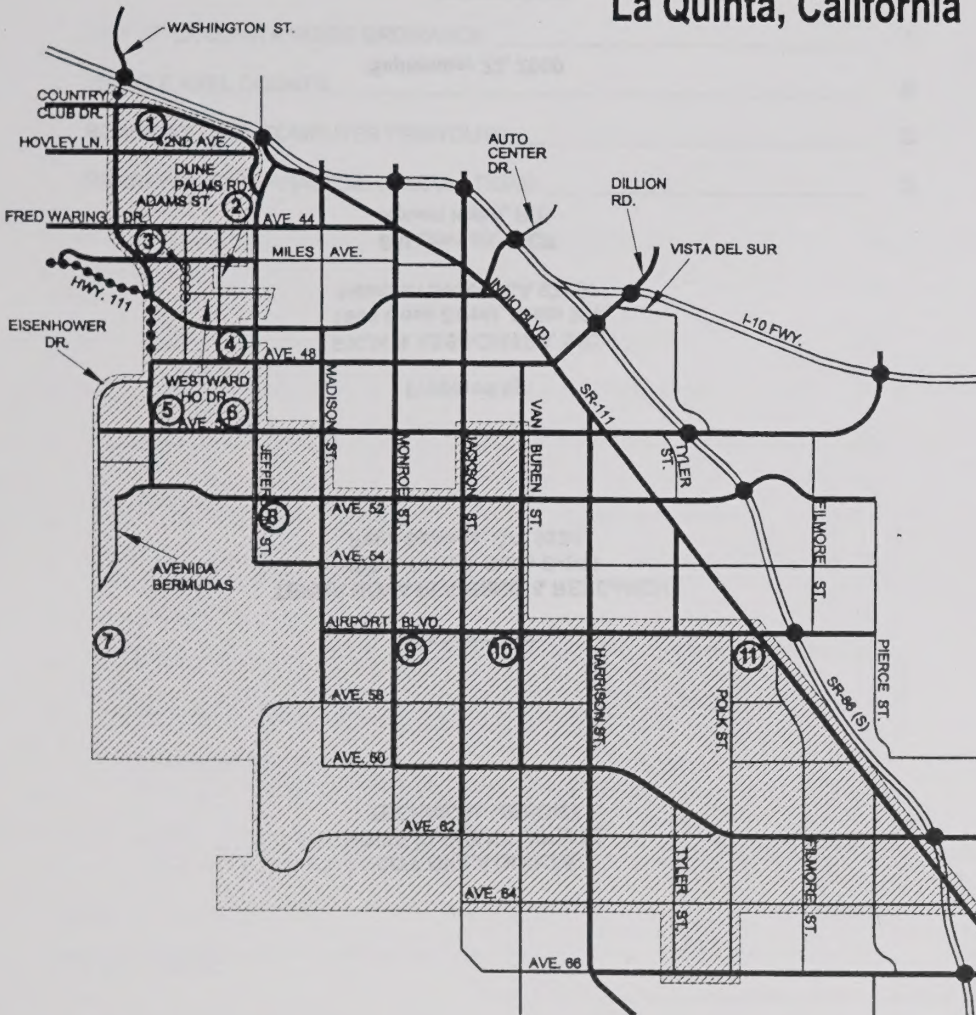


Robert Kahn
Robert Kahn, P.E.
Principal

RKJK
& ASSOCIATES INC.

TRANSPORTATION PLANNING • GIS • TRAFFIC/ACOUSTICAL ENGINEERING

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CITY OF LA QUINTA
NOISE ELEMENT UPDATE
TECHNICAL REPORT

Prepared for:

TERRA NOVA PLANNING & RESEARCH
400 S. Farrell, Suite B-205
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Prepared by:

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Bill Lawson, AICP
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September 22, 2000

JN:0341-98-05
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CITY OF LA QUINTA NOISE ELEMENT UPDATE TECHNICAL REPORT

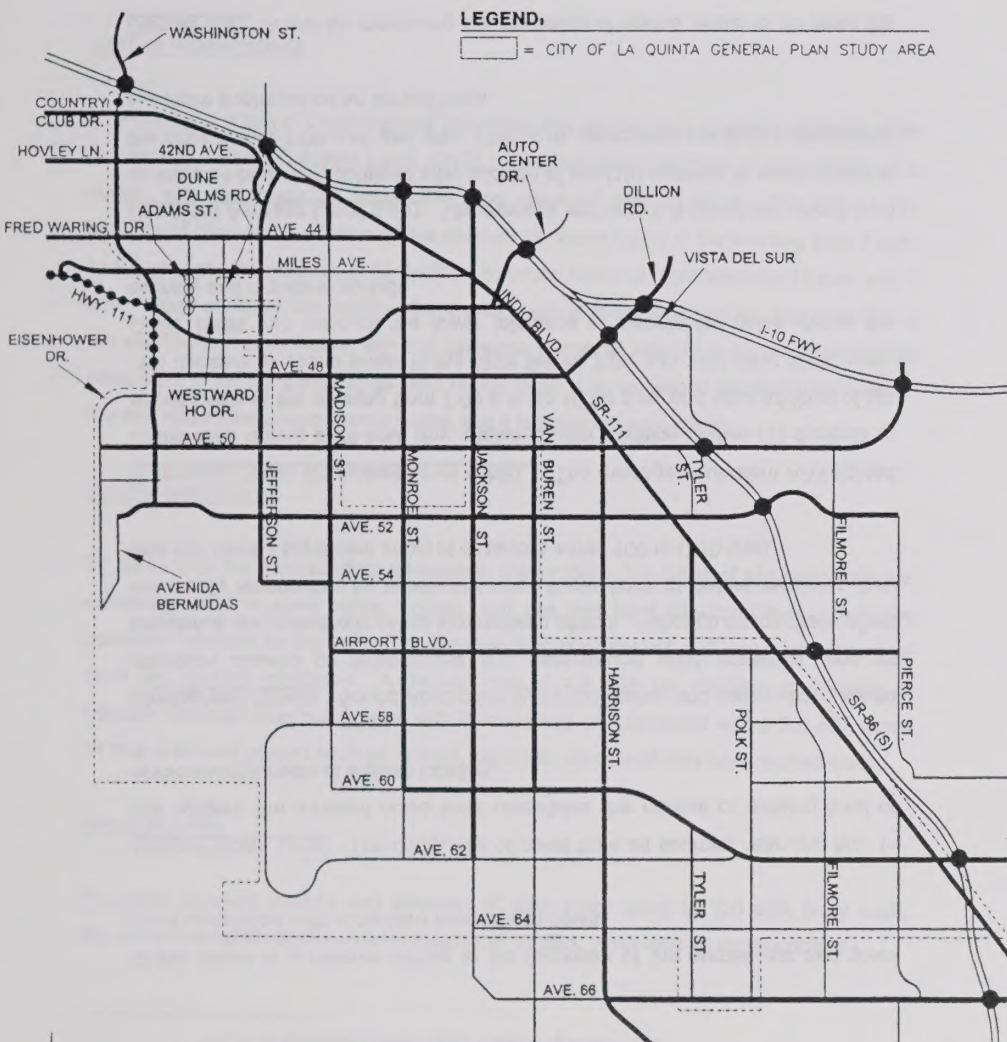
INTRODUCTION

This report presents the technical analysis for used to develop the City of La Quinta Noise Element. The purpose of this noise assessment is to: (1) review the existing noise documents and analysis procedures; (2) identify potential noise sources; (3) model existing noise impacts; (4) compare the noise impacts associated with four future Year 2020 General Plan land use development alternatives; and (5) provide additional discussion of noise standards, aircraft over flights, traffic noise and other impacts. The City of La Quinta is located in the eastern portion of the Coachella Valley south of Interstate 10 Freeway as shown on Exhibit A.

A key objective of the noise element is to provide noise exposure information for use in the land use element. When integrated with the noise element, the land use element will show acceptable land uses in relation to existing and projected noise contours. Section 65302(f) of the Government Code states that *"The noise contours shall be used as a guide for establishing a pattern of land uses in the land use element that minimizes the exposure of community residents to excessive noise."*

Sources of noise can be divided into two basic categories: transportation related sources and non-transportation sources. The existing noise environment surrounding the City of La Quinta is influenced primarily by transportation related noise sources. These transportation related noise sources include traffic noise from nearby roadways (i.e., Washington Street, 42nd Street, etc.); rail noise from the Union Pacific Railroad and, aircraft over flight noise from the Bermuda Dunes and Thermal Airports. Secondary sources of noise include the impacts of non-transportation or stationary noise, such as HVAL Equipment atop Commercial Buildings.

EXHIBIT A LOCATION MAP



NOISE FUNDAMENTALS

Noise, as it has been simply defined is "unwanted sound." It is an undesirable by-product of transportation systems and industrial activities within a community that permeate man's environment and cause disturbance. The full effect of such noise on individuals and the community will vary with its duration, its intensity, and the tolerance level of the exposed individuals.

Airborne sound is the result of a very rapid change in air pressure from the surrounding "normal" atmospheric pressure. The combination of noise from all sources near and far is the Ambient Noise Level¹. For purposes of this discussion, the ambient noise level at a given location is termed "environmental noise". Understanding environmental noise requires some familiarity with the physical description of noise. The important physical characteristics of sound include its frequency range, intensity/loudness and temporal/time-varying aspect. The decibel A-weighted level (dBA), and Community Noise Equivalency Level (CNEL) are all units of measurement used to describe and numerically weight noise.

Terminology

The following terms common in noise evaluation work are defined for the reader's information:

A-Weighted Sound Level - (dBA): The sound pressure level in decibels are measured on a sound meter using the A-Weighting filter network. The A-Weighting filter de-emphasizes the very low and very high frequency components

¹ Model Noise Community Noise Control Ordinance, Office of Noise Control, California Department of Health. Adopted April 1977.

of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.

Ambient Noise Level: The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Atmospheric Effects: Sound Absorption by air molecules and water vapor, sound refraction caused by temperature and near-ground wind gradients, and air turbulence are collectively called atmospheric effects. Although atmospheric effect are mostly responsible for substantial noise fluctuations at distant receivers, they also can have a significant effect at distances within 100 m (330 feet).

Community Noise Equivalent Level (CNEL): The average equivalent A-Weighted sound level during a 24-hour day, obtained after addition of five (5) decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of ten (10) decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m. CNEL takes into account the lower tolerance of people for noise during the evening and nighttime periods.

Day-Night Average Level (Ldn): The average equivalent A-Weighted sound level during a 24-hour day, obtained after addition of ten (10) decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m. represents the daily energy noise exposure averaged on an annual basis.

Decibel (dB): A unit for measuring the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micro-pascals.

Equivalent Energy Level (Leq): The sound level corresponding to a steady state sound level containing the same total energy as a time varying signal over a given sample period.

Impact Insulation Class (IIC): A single number rating used to compare the effectiveness of floor-ceiling assemblies in providing reduction of impact generated sounds such as footsteps.

Line of Sight: A straight line between the observer location and a specific noise source.

Noise: Any unwanted sound or sound which is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying.

Noise Contour: A line drawn around a noise source indicating constant or equal level of noise exposure. CNEL is a typical standard used to describe community exposure to noise.

Sound Level Meter: An instrument, including a microphone, an amplifier, an output meter, and frequency weighing networks for the measurement and determination of noise and sound levels.

Sound Transmission Class (STC): The STC rating is used as a measure of a material's ability to reduce sound.

Uniform Building Code (UBC): provides minimum standards to safeguard life or limb, health, property and public welfare by regulating and controlling the design,

construction, quality of materials, use and occupancy, location and maintenance of all buildings and structures.²

Units of Measurements

The decibel is a unit of measurement describing the amplitude or strength of sound. The Community Noise Equivalent Level (CNEL) is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of five decibels to sound levels in the evening from 7 p.m. to 10 p.m., and the addition of 10 decibels to sound levels at night between 10 p.m. and 7 a.m. These additions are made to the sound levels at these time periods, because during the evening and night hours, with the decrease in overall amount and loudness of noise generated, when compared to daytime hours, there is an increased sensitivity to sounds. For this reason the sound seems louder and it is weighted accordingly.

Ground Absorption

To account for the ground-effect attenuation (absorption), two types of site conditions are commonly used in traffic noise models, soft site and hard site conditions. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. A drop-off rate of 4.5 dBA per doubling of distance is typically observed over soft ground with landscaping, as compared with a 3.0 dBA drop-off rate over hard ground such as asphalt, concrete, stone and very hard packed earth.

Range of Noise

The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises

equate to 110 dBA, which can cause serious discomfort. Due to the logarithmic nature of the sound measuring (decibel) scale, doubling the sound energy of a noise source only increases the decibel rating by 3 dBA. However, due to the internal mechanism of the human ear and how it receives and processes noise, a sound must be nearly 10 dBA higher than another sound to be judged twice as loud. Physical health, psychological well-being, social cohesion, property values and economic productivity can all be affected by excessive amounts of noise. Typical noise levels in terms of the CNEL scale for different types of noise impacts are presented on Exhibit B.

Community Noise Assessment Criteria

In community noise assessment, changes in noise levels greater than 3 dBA are often identified as significant, while changes less than 1 dBA will not be discernible to the human ear. In the range of 1 dBA to 3 dBA people who are very sensitive to noise may perceive a slight change in noise level. No scientific evidence is available to support the use of 3 dBA as the significance threshold. In laboratory testing situations, humans are able to detect noise level changes of slightly less than 1 dBA. However, in a community situation the noise exposure is extended over a long time period, and changes in noise levels occur over years, rather than the immediate comparison made in a laboratory situation. Therefore, the level at which changes in community noise levels become discernible is likely to be some value greater than 1 dBA, and 3 dBA appears to be appropriate for most people.

²

Uniform Building Code, 1991 Edition, Section 102.

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NOISE STANDARDS

To ensure that future development does not adversely impact potential sensitive receptors, the City of La Quinta will continue to use the land use compatibility standards when making planning and development decisions. For noise sensitive land uses, the City limits exterior noise levels to 60 dBA CNEL and interior noise levels to 45 dBA CNEL.

Sensitive receptors include, but are not limited to, schools, churches, and residential uses. Table 1 summarizes the City of La Quinta noise standards for various types of land uses. The standards represent the maximum allowable noise level and will be used as City policy to determine the acceptable noise levels for future development.

Noise Ordinance Criteria

The most effective method to control community noise impacts from non-transportation noise sources is through the application of a community noise ordinance. The adopted City of La Quinta Noise Ordinance (Section 9.100.210) defines the maximum residential/non-residential noise levels (dBA). The noise ordinance standards shown on Table 2 are designed to protect quiet residential areas from a variety of stationary (non-transportation) noise sources such as music or machinery. The City of La Quinta noise ordinance is included in Appendix "A".

Noise and Land Use

The compatibility of different land uses is directly related to the user's sensitivity to noise and the potential for impacts to be mitigated. Particularly sensitive land uses include residences, schools, libraries, churches, hospitals, and nursing homes. In addition, parks, golf courses and other outdoor activity areas can be sensitive to noise disturbances. Less sensitive land uses include commercial and industrial uses, hotels and motels, playgrounds and neighborhood ballparks, and other outdoor spectator sport arenas. Least sensitive to noise are heavy commercial / industrial uses, transportation, communication and utility land uses. Exhibit B illustrates the ranges of allowable exterior

TABLE 1

CITY OF LA QUINTA INTERIOR AND EXTERIOR NOISE STANDARDS

CATEGORIES	LAND USE	NOISE STANDARDS	
		INTERIOR ^{1,2}	EXTERIOR
Residential	Single and multi-family, duplex, mobile homes, Group Quarter	45 dBA CNEL	60 dBA CNEL ³
Commercial	Hotel, motel, transient lodging,	45 dBA CNEL	70 dBA CNEL
	Private offices, research and development	45 dBA Leq	75 dBA CNEL
	General office, reception/clerical	50 dBA Leq	75 dBA CNEL
	Commercial retail, bank, restaurant	55 dBA Leq	75 dBA CNEL
	Manufacturing, warehousing, etc.	65 dBA Leq	75 dBA CNEL
Open Space/Rec.	Parks & Playgrounds	--	65 dBA CNEL ⁴
	Golf, Tennis, Stables	--	70 dBA CNEL ⁴
Institutional/Public	Hospital, nursing home, school classroom, church, library	45 dBA Leq	60 dBA Leq ⁴

¹ Noise standard with windows closed. Mechanical ventilation shall be provided per UBC requirements.² Indoor environment excluding bathrooms, toilets, closets and corridors.³ Outdoor environment limited to rear yard of single homes, multifamily patios and balconies (with a depth of 6' or more) and common recreational areas.⁴ Outdoor environment limited to playground areas and picnic areas.

TABLE 2

CITY OF LA QUINTA NOISE ORDINANCE
MAXIMUM RESIDENTIAL / NON-RESIDENTIAL NOISE LEVELS (dBA)¹

CATEGORIES	MAXIMUM DURATION PERIOD	PERCENT NOISE LEVEL ²	NOISE LEVEL ADJUSTMENTS ABOVE BASE EXTERIOR NOISE STANDARD ³	MAXIMUM EXTERIOR NOISE LEVEL (dBA) ⁴	
				7:00 AM TO 10:00 PM	10:00 PM TO 7:00 AM
Residential	30 Minutes	L ₅₀	+0	60	50
	15 Minutes	L ₂₅	+5	65	55
	5 Minutes	L ₈	+10	70	60
	1 Minutes	L ₂	+15	75	65
	Not Permitted	L _{max}	+20	80	70
Other Non-Residential	30 Minutes	L ₅₀	+0	75	65
	15 Minutes	L ₂₅	+5	80	70
	5 Minutes	L ₈	+10	85	75
	1 Minutes	L ₂	+15	90	80
	Not Permitted	L _{max}	+20	95	85

¹ "Not to exceed" criteria for areas impacted by stationary noise sources.² The percent noise level is the level exceeded "n" percent of the time during the measurement period. L₅₀ is the noise level exceeded 50% of the time.³ If the ambient or background noise level exceeds any of the noise categories, no increase above the ambient noise level shall be permitted.⁴ Equals Base Ambient Exterior Noise Level plus the noise level adjustments.

EXHIBIT B NOISE COMPATIBILITY MATRIX

noise levels for various land uses based on the 1998 State of California General Plan Guidelines.

Land Use Category	Community Noise Exposure L _{dn} or CNEL, dB					
	55	60	65	70	75	80
Residential - Low Density Single Family, Duplex, Mobile Homes						
Residential - Multi-Family						
Transient Lodging - Motels, Hotels						
Schools, Libraries, Churches, Hospitals, Nursing Homes						
Auditoriums, Concert Halls, Amphitheaters						
Sports Arena, Outdoor Spectator Sports						
Playgrounds, Neighborhood Parks						
Golf Courses, Riding Stables, Water Recreation, Cemeteries						
Office Buildings, Business Commercial and Professional						
Industrial, Manufacturing, Utilities, Agriculture						

INTERPRETATION:



Normally Acceptable
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.



Conditionally Acceptable
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.



Normally Unacceptable
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.



Clearly Unacceptable
New construction or development should generally not be undertaken.

SOURCE: STATE OF CALIFORNIA GENERAL
PLAN GUIDELINES, NOVEMBER 1998

RKJK
ASSOCIATES INC.

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NOISE LEVEL MEASUREMENTS

To determine the existing noise level environment and to assess potential noise impacts on the adjacent residential areas, noise measurements were taken during the hours between 9:00 a.m. and 12:00 p.m. at eleven (11) locations on July 27, 1999 and September 1, 1999.

The Noise monitoring locations were selected based on their proximity to major noise sources. In the City of La Quinta, the primary noise impacts are associated with vehicle traffic noise on the City streets. The measurements reflect the typical traffic noise impacts that occur throughout the City. The noise monitoring locations identified on Exhibit C were selected based on their proximity to potential noise sources and feedback from City staff.

Measurement Procedure and Criteria

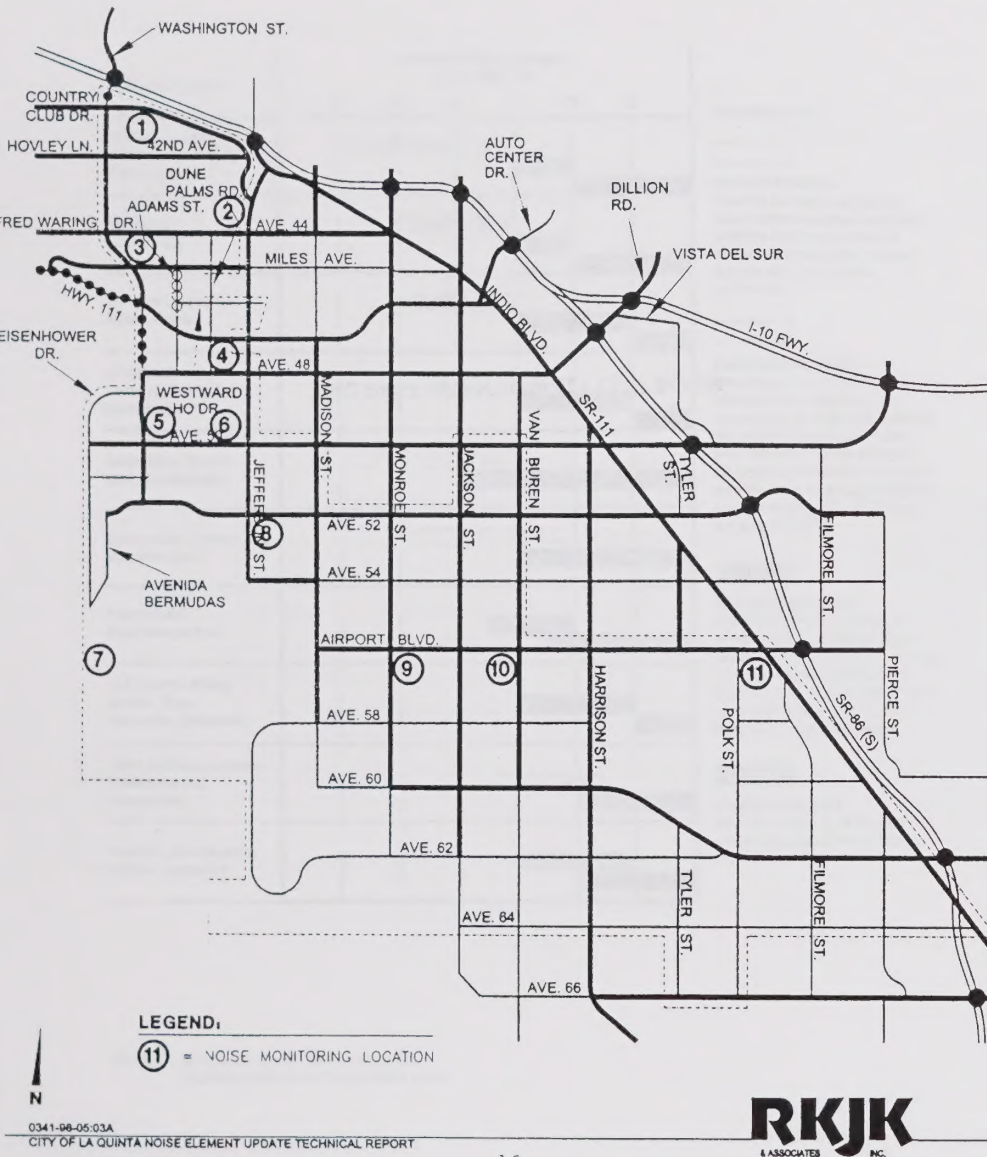
Noise measurements were taken using a LARSON-DAVIS Model 700 precision integrating sound level meter, programmed, in "slow" mode, to record noise levels in "A" weighted form. The sound level meter was calibrated before and after the monitoring with a LARSON-DAVIS calibrator, Model CA 250. The sound level meter and microphone were mounted on a tripod, five feet above the ground and equipped with a windscreen during all measurements. The above instrument automatically calculates the "percent noise levels" (L_n) for any specific time period.

The percent noise level " L_n " is useful to evaluate intermittent noise sources. The percent noise level is the level exceeded "n" percent of the time during the measurement period. L_{90} is the noise level exceeded 90 percent of the time measured, commonly used to estimate the "ambient" noise level. L_{50} is the noise level exceeded 50 percent of the time measured and can be seen as the "average" noise level. L_{10} is the noise level exceeded 10 percent of the time measured, and represents the peak or intrusive noise level.

EXHIBIT C NOISE MONITORING LOCATIONS

Noise Measurement Locations

Each noise monitoring location is described below:



1. Site 1 was located approximately 100 feet south of Country club Drive and 100 feet east of Starlight Lane. The monitor was stationed in an undeveloped parcel near an existing residential community located just south of the I-10 Freeway, the railroad and east of the Bermuda Dunes Airport. Even though several light general aviation aircraft flew over the noise monitor, the primary noise source was vehicle traffic on the I-10 Freeway and Country Club Drive.
2. Site 2 was located 100 feet north and west of the intersection of Fred Waring Drive and Jefferson Street. The primary noise source was vehicle traffic noise.
3. Site 3 was situated opposite the Indian wells Gardens Tennis Stadium approximately 50 feet east of Washington Street centerline. The noise measurement was taken in front of an existing twelve foot high berm/wall protecting the residents of La Quinta Del Oro.
4. Site 4 was located 100' feet south of Highway 111 centerline east of the auto mall and west of Dune Palms Road.
5. Site 5 was located on the northeast corner of Washington Street and Avenue 50 approximately 100 feet from the centerline of each.
6. Site 6 was located between Harry S. Truman Elementary School and the Boys & Girls Club approximately 100 feet from the centerline of Avenue 50.
7. Site 7 was located north of 52565 Eisenhower and approximately 100 feet from the roadway centerline between Calle Nogales and Calle Chihuahua.
8. Site 8 was located approximately 100 feet from the centerline on the southeast corner of Avenue 52 and Jefferson Street
9. Site 9 was located approximately 50 feet south of Airport Boulevard in front of the Westside School
10. Site 10 was located approximately 50 feet from the street centerline of Airport Boulevard opposite Coachella Valley Union High School. The primary noise source was vehicle traffic on Airport Boulevard.

11. Site 11 was taken at the Southwest Corner of Highway 111 and Church Street east of Thermal Airport.

Noise Measurement Results

The results of the noise level measurements are presented in Table 3. Each site was monitored for a minimum time period of 10 minutes. Based on the noise measurement results presented in Table 3, the City of La Quinta currently experiences ambient noise levels of ranging from Leq = 57.9 dBA in the residential areas (Location 7) to Leq = 70.5 dBA near Washington Street (Location 3). The estimated CNEL values ranged from 61.3 to 74.2 dBA CNEL.

TABLE 3
EXISTING (AMBIENT) NOISE LEVEL MEASUREMENTS

MONITORING LOCATION ¹	NOISE MONITORING DATE	TIME	LOCATION	MEASURED EXTERIOR NOISE LEVELS (dBA_Leq)	ESTIMATED CNEL
1	7/27/99	9:55 AM	Site 1 was located approximately 100 feet south of Country club Drive and 100 feet east of Starlight Lane.	61.8	65.5
2	7/27/99	10:10 AM	Site 2 was located 100 feet north and west of the intersection of Fred Waring Drive and Jefferson Street.	59.6	63.3
3	7/27/99	10:30 AM	Site 3 was situated opposite the Indian wells Gardens Tennis Stadium approximately 50 feet east of Washington Street centerline.	70.5	74.2
4	7/27/99	10:50 AM	Site 4 was located 100' feet south of Highway 111 centerline east of the automall and west of Dune Palms Road	62.8	66.5
5	7/27/99	11:15 AM	Site 5 was located on the northeast corner of Washington Street and Avenue 50 approximately 100 feet from the centerline of each.	65.8	69.3
6	7/27/99	11:35 AM	Site 6 was located between Harry S. Truman Elementary School and the Boys & Girls Club approximately 100 feet from the centerline of Avenue 50.	64.9	68.4
7	7/27/99	11:55 AM	Site 7 was located north of 52565 Eisenhower and approximately 100 feet from the roadway centerline between Calle Nogales and Calle Chihuahua.	57.9	61.3
8	9/1/99	10:50 AM	Site 8 was located approximately 100 feet from the centerline on the southeast corner of Avenue 52 and Jefferson Street	63.9	67.4
9	9/1/99	10:25 AM	Site 9 was located approximately 50 feet south of Airport Boulevard in front of the Westside School	58.6	62.3
10	9/1/99	10:06 AM	Site 10 was located approximately 50 feet from the street centerline of Airport Boulevard opposite Coachella Valley Union High School.	58.8	62.5
11	9/1/99	9:45 AM	Site 11 was taken at the Southwest Corner of Highway 111 and Church Street west of Thermal Airport	65.9	69.6

¹ Exhibit B shows the noise monitoring locations.

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NOISE IMPACT ASSESSMENT

In the City of La Quinta, the primary source of noise is generated from vehicular traffic on major roadways such as Washington Street, Jefferson Street and Highway 111. Additional noise impacts are by the Union Pacific rail lines, which exists along the City sphere of influence boundaries to the north and east. The City of La Quinta is also impacted from frequent aircraft over flights from both the Bermuda Dunes and Thermal Airports. The most effective method available to the City to mitigate transportation noise and reduce community noise impacts, is through the construction of noise barriers and by site design review.

The impacts of non-transportation noise (i.e. commercial and industrial centers) are controlled through the enforcement and application of Section 9.100.210 of the City's Noise Ordinance. The Noise Ordinance sets criteria for residential areas impacted by stationary noise sources, including "not to exceed" noise levels for various periods of time. The noise ordinance does not apply to motor vehicle noise on public streets or other transportation related noise sources that are preempted by the State or Federal government regulations.

Traffic Noise Prediction

The expected roadway noise impacts were projected using a version of the Federal Highway Administration (FHWA) Traffic Noise Prediction Model (FHWA-RD-77-108), as modified for CNEL and the "CALVENO" energy curves together with several key roadway site parameters. The key input parameters, which determine the projected impact of vehicular traffic noise include; the roadway classification (e.g. collector, secondary, major, arterial, etc.); the roadway active width (the distance between the center of the outer most travel lanes on each side of the roadway); the total vehicle count per day (ADT), the travel speed, the percentages of automobiles, medium trucks and heavy trucks in the roadway volume; the roadway grade; the angle of view; the site conditions ("hard" or "soft") and the

percentage of total average daily traffic (ADT), which flows each hour throughout a 24 hour period.

To account for the ground-effect attenuation, soft site conditions were used to calculate all noise contours. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. A drop-off rate of 4.5 dBA per doubling of distance is typically observed over soft ground, as compared with a 3.0 dBA drop-off rate over hard ground such as concrete, stone and very hard packed earth. In addition, soft site conditions account for the effect of existing topography, noise barriers or buildings that may alter the roadway noise levels.

The traffic volumes and travel speeds used for this study are presented in Table 4. The traffic volumes shown in Table 4 were obtained from the La Quinta General Plan Update Traffic Study (Revised), prepared by RKJK & Associates, Inc. on September 12, 2000. The average travel speeds shown in Table 4 are expected to occur during smooth traffic flows on subject roadways. It should be noted that these speeds are used for comparison calculations and consequently their change in value is more relevant than their absolute value. For the purpose of this study all calculations were made with the speed values shown in Table 4. Soft site conditions (drop-off rate = 4.5 dBA per doubling of distance) were used to calculate all noise contours.

Expected future roadway parameter information for the percentages of automobile, medium trucks and heavy trucks along with the hourly percentage of traffic flow breakdown were taken from 24-hour vehicle axle counts. Based on feedback from City staff, three vehicle axle count locations were identified. 24-hour axle counts were taken on September 9, 1999 at 42nd Street east of Adams, Washington Street north of 50th Avenue and Jefferson Street north of Avenue 54.

A review of the traffic flow percentages indicates that trucks represent 2.28% of the total daily traffic. The roadway and site parameter values used to project future roadway noise impacts are presented in Table 5. The vehicle axle counts are included in Appendix "C"

TABLE 4
AVERAGE DAILY TRAFFIC (1000's)¹

ROADWAY	SEGMENT	EXISTING	GENERAL PLAN ALTERNATIVE			
			REC. ²	EXISTING	HIGH	LOW
Washington St.	n/o 42nd Ave.	24.0	52.7	52.2	53.6	51.9
Washington St.	s/o Avenue 44	20.5	68.4	65.5	68.9	65.0
Washington St.	s/o Highway 111	28.1	67.2	63.3	67.8	62.7
Washington St.	n/o Avenue 50	21.7	53.2	53.0	54.3	50.4
Washington St.	n/o Avenue 52	17.2	38.5	36.5	39.6	32.2
Jefferson St.	n/o Highway 111	10.8	33.6	31.2	34.5	28.2
Jefferson St.	s/o Avenue 48	11.7	47.3	41.2	48.6	38.0
Madison St.	n/o Avenue 52	0.5	28.2	21.0	27.5	19.9
Madison St.	s/o Avenue 54	--	44.0	35.7	45.2	35.7
Harrison St.	s/o Airport Blvd.	--	54.3	46.0	56.9	48.3
Harrison St.	s/o Avenue 60	--	41.6	33.8	42.6	33.5
SR-111	s/o Avenue 60	--	21.4	21.1	23.8	21.6
Avenue 44	w/o Jefferson St.	--	31.2	30.2	33.0	30.6
Highway 111	w/o Jefferson St.	--	48.5	48.0	49.9	46.0
Avenue 48	w/o Jefferson St.	--	35.8	35.1	36.7	28.2
Avenue 50	w/o Jefferson St.	7.8	27.2	25.7	28.1	23.6
Avenue 50	e/o Jefferson St.	5.9	22.7	17.6	23.5	17.1
Avenue 52	w/o Jefferson St.	8.5	32.9	26.7	34.0	25.6
Avenue 52	e/o Madison St.	3.7	25.6	17.0	25.4	16.5
Avenue 52	w/o Van Buren St.	--	21.8	15.9	22.2	16.4
Airport Blvd.	e/o Madison St.	--	19.3	13.1	19.8	15.7
Airport Blvd.	w/o Van Buren St.	--	29.2	21.5	30.5	24.6
Airport Blvd.	w/o SR-111	--	33.8	22.4	37.3	31.2
Avenue 60	w/o Filmore St.	--	9.8	7.0	15.4	8.9

¹ SOURCE: La Quinta General Plan Update Traffic Study (Revised), prepared by RKJK & Associates, Inc. on 9

² REC: Recommended

n/o: North of, s/o: South of, e/o: East of, w/o: West of

TABLE 5

HOURLY TRAFFIC FLOW DISTRIBUTION¹

MOTOR-VEHICLE TYPE	DAYTIME (7 AM TO 7 PM)	EVENING (7 PM TO 10 PM)	NIGHT (10 PM TO 7 AM)	TOTAL % TRAFFIC FLOW
Automobiles	70.9%	17.6%	11.6%	97.72%
Medium Trucks	62.1%	19.3%	18.6%	1.72%
Heavy Trucks	66.9%	15.9%	17.2%	0.56%

¹ Derived from 24-hour vehicle axle counts taken from 42nd Street east of Adams, Washington Street north of 50th Avenue and Jefferson Street north of Avenue 54 on September 9, 1999. Vehicle axle counts are in Appendix "C"

Traffic Noise Contours

The data presented in Tables 4 and 5 were used with the FHWA traffic noise prediction model to determine the traffic noise contours (CNEL). The computed traffic noise levels are expressed in terms of CNEL. Computer printouts in terms of CNEL are included in Appendix "C".

The distances to the CNEL contours for select roadway segments in the City of La Quinta are presented in Tables 6 through 10, for the existing, the General Plan Recommended Alternative, the Existing General Plan Alternative, the General Plan High Alternative, and the General Plan Low Alternative traffic volumes. The distances shown (in feet) are measured from the centerline of the road to the contour value shown. Also included in Tables 6 through 10 is the CNEL level at a distance of 100 feet from the highway centerline. For reference, the railroad noise contour distances are also included in Tables 6 through 10.

The values given in Tables 6 through 10 are based upon soft site conditions and do not take into account the effects of any noise barriers, topography or final roadway grades that may affect ambient noise levels. These are appropriate assumptions for this level of noise analysis. Final noise studies should be prepared at the time future noise sensitive development occurs. These studies should take into account the effect of noise barriers and actual topography.

Traffic Noise Contours Comparison

Table 11 provides a summary of the noise contours for existing conditions and each of the four General Plan Land Use Alternatives. The noise contour summary indicates that the existing noise levels range from 49.8 to 69.5 dBA CNEL 100 feet from the street centerline. Noise levels at the same locations are projected to increase to a level ranging from 61.3 to 73.3 with built of the General Plan. A comparison of each of the General

TABLE 6
EXISTING NOISE CONTOURS

ROAD	SEGMENT	CNEL AT 100 FEET (dBA)	DISTANCE TO CONTOUR (FEET)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Washington St.	n/o 42nd Ave.	67.0	63	135	291	627
Washington St.	s/o Avenue 44	66.3	56	122	262	564
Washington St.	s/o Highway 111	69.5	92	199	428	923
Washington St.	n/o Avenue 50	66.5	59	126	272	586
Washington St.	n/o Avenue 52	65.5	50	108	233	502
Jefferson St.	n/o Highway 111	63.5	37	79	171	368
Jefferson St.	s/o Avenue 48	63.8	39	84	180	388
Madison St.	n/o Avenue 52	49.8	5	10	21	45
Madison St.	s/o Avenue 54	--	--	--	--	--
Harrison St.	s/o Airport Blvd.	--	--	--	--	--
Harrison St.	s/o Avenue 60	--	--	--	--	--
SR-111	s/o Avenue 60	--	--	--	--	--
Avenue 44	w/o Jefferson St.	--	--	--	--	--
Highway 111	w/o Jefferson St.	--	--	--	--	--
Avenue 48	w/o Jefferson St.	--	--	--	--	--
Avenue 50	w/o Jefferson St.	61.8	28	61	131	282
Avenue 50	e/o Jefferson St.	60.6	23	51	109	235
Avenue 52	w/o Jefferson St.	62.1	30	64	139	299
Avenue 52	e/o Madison St.	58.5	17	37	80	172
Avenue 52	w/o Van Buren St.	--	--	--	--	--
Airport Blvd.	e/o Madison St.	--	--	--	--	--
Airport Blvd.	w/o Van Buren St.	--	--	--	--	--
Airport Blvd.	w/o SR-111	--	--	--	--	--
Avenue 60	w/o Filmore St.	--	--	--	--	--

¹ Measured from the centerline of the street

TABLE 7
RECOMMENDED GENERAL PLAN ALTERNATIVE NOISE CONTOURS

ROAD	SEGMENT	CNEL AT 100 FEET (dBA)	DISTANCE TO CONTOUR (FEET)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Washington St.	n/o 42nd Ave.	70.4	106	228	491	1,059
Washington St.	s/o Avenue 44	71.5	126	271	585	1,260
Washington St.	s/o Highway 111	73.3	165	356	766	1,650
Washington St.	n/o Avenue 50	70.4	107	230	494	1,065
Washington St.	n/o Avenue 52	69.0	86	185	399	859
Jefferson St.	n/o Highway 111	68.4	78	169	364	784
Jefferson St.	s/o Avenue 48	69.9	99	212	457	985
Madison St.	n/o Avenue 52	67.3	67	143	309	665
Madison St.	s/o Avenue 54	69.6	94	202	436	939
Harrison St.	s/o Airport Blvd.	70.5	108	233	501	1,080
Harrison St.	s/o Avenue 60	69.3	90	195	420	904
SR-111	s/o Avenue 60	66.1	55	119	257	554
Avenue 44	w/o Jefferson St.	67.8	71	153	330	712
Highway 111	w/o Jefferson St.	70.0	100	216	465	1,002
Avenue 48	w/o Jefferson St.	68.4	78	168	362	780
Avenue 50	w/o Jefferson St.	67.2	65	140	302	650
Avenue 50	e/o Jefferson St.	66.4	58	124	267	576
Avenue 52	w/o Jefferson St.	68.0	74	159	342	737
Avenue 52	e/o Madison St.	66.9	62	134	290	624
Avenue 52	w/o Van Buren St.	66.2	56	121	260	561
Airport Blvd.	e/o Madison St.	65.7	52	111	240	517
Airport Blvd.	w/o Van Buren St.	67.5	68	147	316	681
Airport Blvd.	w/o SR-111	68.4	79	170	365	787
Avenue 60	w/o Filmore St.	62.8	33	71	153	329

¹ Measured from the centerline of the street

TABLE 8
EXISTING GENERAL PLAN ALTERNATIVE NOISE CONTOURS

ROAD	SEGMENT	CNEL AT 100 FEET (dBA)	DISTANCE TO CONTOUR (FEET)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Washington St.	n/o 42nd Ave.	70.3	105	227	488	1,052
Washington St.	s/o Avenue 44	71.3	122	264	568	1,224
Washington St.	s/o Highway 111	73.0	159	342	736	1,586
Washington St.	n/o Avenue 50	70.4	106	229	493	1,063
Washington St.	n/o Avenue 52	68.8	83	179	385	829
Jefferson St.	n/o Highway 111	68.1	75	161	346	746
Jefferson St.	s/o Avenue 48	69.3	90	194	417	898
Madison St.	n/o Avenue 52	66.1	55	118	254	547
Madison St.	s/o Avenue 54	68.7	82	176	379	817
Harrison St.	s/o Airport Blvd.	69.8	97	208	449	967
Harrison St.	s/o Avenue 60	68.4	79	170	365	787
SR-111	s/o Avenue 60	66.1	55	118	255	548
Avenue 44	w/o Jefferson St.	67.6	70	150	323	697
Highway 111	w/o Jefferson St.	70.0	99	214	462	995
Avenue 48	w/o Jefferson St.	68.3	77	166	357	770
Avenue 50	w/o Jefferson St.	66.9	63	135	290	626
Avenue 50	e/o Jefferson St.	65.3	49	105	226	486
Avenue 52	w/o Jefferson St.	67.1	64	138	298	642
Avenue 52	e/o Madison St.	65.1	47	102	220	475
Avenue 52	w/o Van Buren St.	64.9	45	98	211	454
Airport Blvd.	e/o Madison St.	64.0	40	86	185	399
Airport Blvd.	w/o Van Buren St.	66.2	56	120	258	555
Airport Blvd.	w/o SR-111	66.7	60	129	278	598
Avenue 60	w/o Filmore St.	61.3	26	57	122	263

¹ Measured from the centerline of the street

TABLE 9
GENERAL PLAN HIGH ALTERNATIVE NOISE CONTOURS

ROAD	SEGMENT	CNEL AT 100 FEET (dBA)	DISTANCE TO CONTOUR (FEET)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Washington St.	n/o 42nd Ave.	70.4	107	231	497	1,071
Washington St.	s/o Avenue 44	71.5	127	273	588	1,266
Washington St.	s/o Highway 111	73.3	166	358	771	1,660
Washington St.	n/o Avenue 50	70.5	108	233	501	1,080
Washington St.	n/o Avenue 52	69.1	87	189	406	875
Jefferson St.	n/o Highway 111	68.5	80	172	370	798
Jefferson St.	s/o Avenue 48	70.0	100	216	466	1,003
Madison St.	n/o Avenue 52	67.2	65	141	304	654
Madison St.	s/o Avenue 54	69.7	96	206	444	956
Harrison St.	s/o Airport Blvd.	70.7	111	240	517	1,114
Harrison St.	s/o Avenue 60	69.4	92	198	426	919
SR-111	s/o Avenue 60	66.6	59	128	276	594
Avenue 44	w/o Jefferson St.	68.0	74	159	343	739
Highway 111	w/o Jefferson St.	70.1	102	220	474	1,021
Avenue 48	w/o Jefferson St.	68.5	79	171	368	793
Avenue 50	w/o Jefferson St.	67.3	66	143	308	664
Avenue 50	e/o Jefferson St.	66.6	59	127	274	589
Avenue 52	w/o Jefferson St.	68.2	75	162	350	754
Avenue 52	e/o Madison St.	66.9	62	134	288	621
Avenue 52	w/o Van Buren St.	66.3	57	122	263	567
Airport Blvd.	e/o Madison St.	65.8	53	113	244	526
Airport Blvd.	w/o Van Buren St.	67.7	70	151	325	701
Airport Blvd.	w/o SR-111	68.9	84	181	390	841
Avenue 60	w/o Filmore St.	64.7	44	96	206	445

¹ Measured from the centerline of the street

TABLE 10
GENERAL PLAN LOW ALTERNATIVE NOISE CONTOURS

ROAD	SEGMENT	CNEL AT 100 FEET (dBA)	DISTANCE TO CONTOUR (FEET)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Washington St.	n/o 42nd Ave.	70.3	105	226	486	1,048
Washington St.	s/o Avenue 44	71.3	122	262	565	1,218
Washington St.	s/o Highway 111	73.0	158	340	731	1,576
Washington St.	n/o Avenue 50	70.2	103	221	477	1,028
Washington St.	n/o Avenue 52	68.2	76	164	354	762
Jefferson St.	n/o Highway 111	67.7	70	150	324	698
Jefferson St.	s/o Avenue 48	69.0	85	183	395	851
Madison St.	n/o Avenue 52	65.8	53	114	245	527
Madison St.	s/o Avenue 54	68.7	82	176	379	817
Harrison St.	s/o Airport Blvd.	70.0	100	215	464	999
Harrison St.	s/o Avenue 60	68.4	78	169	363	783
SR-111	s/o Avenue 60	66.2	56	120	259	557
Avenue 44	w/o Jefferson St.	67.7	70	151	326	703
Highway 111	w/o Jefferson St.	69.8	97	208	449	967
Avenue 48	w/o Jefferson St.	67.3	67	143	309	665
Avenue 50	w/o Jefferson St.	66.6	59	127	274	591
Avenue 50	e/o Jefferson St.	65.2	48	103	221	477
Avenue 52	w/o Jefferson St.	66.9	62	134	290	624
Avenue 52	e/o Madison St.	65.0	47	100	216	466
Avenue 52	w/o Van Buren St.	65.0	46	100	215	464
Airport Blvd.	e/o Madison St.	64.8	45	97	209	450
Airport Blvd.	w/o Van Buren St.	66.8	61	131	282	608
Airport Blvd.	w/o SR-111	68.1	75	161	346	746
Avenue 60	w/o Filmore St.	62.3	31	66	143	308

¹ Measured from the centerline of the street

TABLE 11
NOISE CONTOUR SUMMARY

ROAD	SEGMENT	CNEL AT 100 FEET (dBA) ¹					
		EXISTING	GENERAL PLAN ALTERNATIVE				VARIATION ³
			REC. ²	EXISTING	HIGH	LOW	
Washington St.	n/o 42nd Ave.	67.0	70.4	70.3	70.4	70.3	0.1
Washington St.	s/o Avenue 44	66.3	71.5	71.3	71.5	71.3	0.3
Washington St.	s/o Highway 111	69.5	73.3	73.0	73.3	73.0	0.3
Washington St.	n/o Avenue 50	66.5	70.4	70.4	70.5	70.2	0.3
Washington St.	n/o Avenue 52	65.5	69.0	68.8	69.1	68.2	0.9
Jefferson St.	n/o Highway 111	63.5	68.4	68.1	68.5	67.7	0.9
Jefferson St.	s/o Avenue 48	63.8	69.9	69.3	70.0	69.0	1.1
Madison St.	n/o Avenue 52	49.8	67.3	66.1	67.2	65.8	1.5
Madison St.	s/o Avenue 54	--	69.6	68.7	69.7	68.7	1.0
Harrison St.	s/o Airport Blvd.	--	70.5	69.8	70.7	70.0	0.9
Harrison St.	s/o Avenue 60	--	69.3	68.4	69.4	68.4	1.0
SR-111	s/o Avenue 60	--	66.1	66.1	66.6	66.2	0.5
Avenue 44	w/o Jefferson St.	--	67.8	67.6	68.0	67.7	0.4
Highway 111	w/o Jefferson St.	--	70.0	70.0	70.1	69.8	0.4
Avenue 48	w/o Jefferson St.	--	68.4	68.3	68.5	67.3	1.1
Avenue 50	w/o Jefferson St.	61.8	67.2	66.9	67.3	66.6	0.8
Avenue 50	e/o Jefferson St.	60.6	66.4	65.3	66.6	65.2	1.4
Avenue 52	w/o Jefferson St.	62.1	68.0	67.1	68.2	66.9	1.2
Avenue 52	e/o Madison St.	58.5	66.9	65.1	66.9	65.0	1.9
Avenue 52	w/o Van Buren St.	--	66.2	64.9	66.3	65.0	1.4
Airport Blvd.	e/o Madison St.	--	65.7	64.0	65.8	64.8	1.8
Airport Blvd.	w/o Van Buren St.	--	67.5	66.2	67.7	66.8	1.5
Airport Blvd.	w/o SR-111	--	68.4	66.7	68.9	68.1	2.2
Avenue 60	w/o Filmore St.	--	62.8	61.3	64.7	62.3	3.4

¹ Measured from the centerline of the street

² REC: Recommended

³

EXHIBIT D BERMUDA DUNES AIRPORT NOISE CONTOUR BOUNDARIES

Plan land use alternatives suggests that noise levels will generally vary by less than 3 dBA for each alternative.

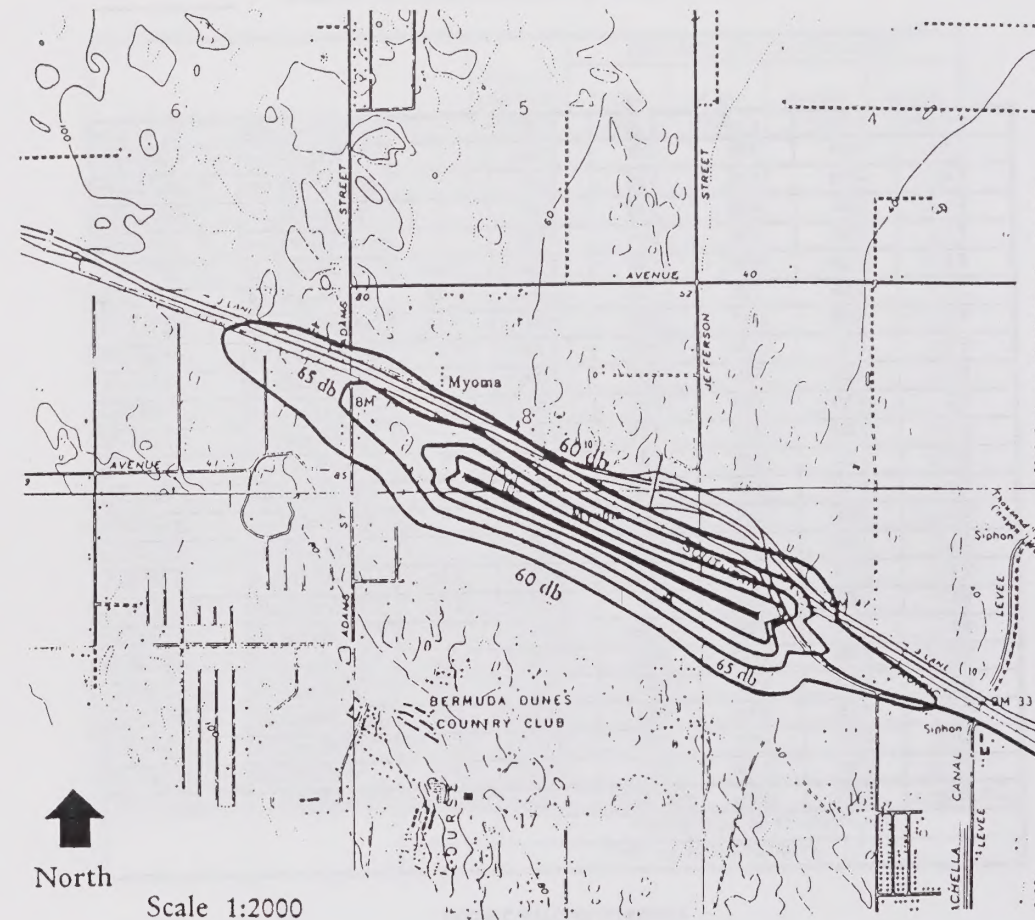
Aircraft Noise from Bermuda Dunes Airport

The future noise impacts of Bermuda Dunes Airport will be directly related the increasing number of flight operations occurring each day and the time of day at which they occur. Noise from aircraft and aircraft operations result in take-off and landing noise, as well as overflight noise in the City of La Quinta and the surrounding areas. The Bermuda Dunes Airport currently supports 25,332 yearly aircraft operations. The majority of these aircraft operations consist of the smaller single-engine general aviation aircraft. Future demand is projected to increase to approximately 26,852 yearly aircraft operations. Based on the Bermuda dunes Airport Noise Study prepared by Aviation Systems Associates, Inc. on February 7, 1996; *"The small increase in operations and the continuing conversion of the General Aviation jet fleet to Stage 3 aircraft (quieter engine standards) have offsetting effects and the future airport noise contours are virtually the same as the existing conditions."*

The Riverside County Airport Land Use Commission has adopted a 60 dBA CNEL noise standard for Bermuda Dunes Airport in the Airport Land Use Plan. Using the criteria, approximately 384 acres and 71 residential dwelling units are contained within the 60 dBA CNEL noise contour boundary. Exhibit D presents the future noise contour boundaries for the Bermuda Dunes Airport.

Aircraft Noise from Thermal Airport

The Thermal Airport Environmental Impact Report prepared by for the Riverside County Economic Development Agency outlines the projected future Year 2010 noise conditions with the extension of Runway 17-35 to 10,000 feet. Based on the proposed Thermal Airport development, the 60 dBA CNEL noise contour for year 2010 will encompass approximately 2,327 acres. With the extension of the primary runway 17-35, the resulting



SOURCE: BERMUDA DUNES AIRPORT NOISE STUDY
PREPARED BY AVIATION SYSTEMS
ASSOCIATES, INC. ON FEBRUARY 7, 1996.

0341-98-05:04A
CITY OF LA QUINTA NOISE ELEMENT UPDATE TECHNICAL REPORT

RKJK
ASSOCIATES INC.

noise contours would extend to the north and south along the runway placing the noise exposure over areas planned primarily for commercial and industrial development. Exhibit E presents the 2010 Thermal Airport Proposed Action – Alternative D noise contour boundaries.

Railroad Noise Impacts

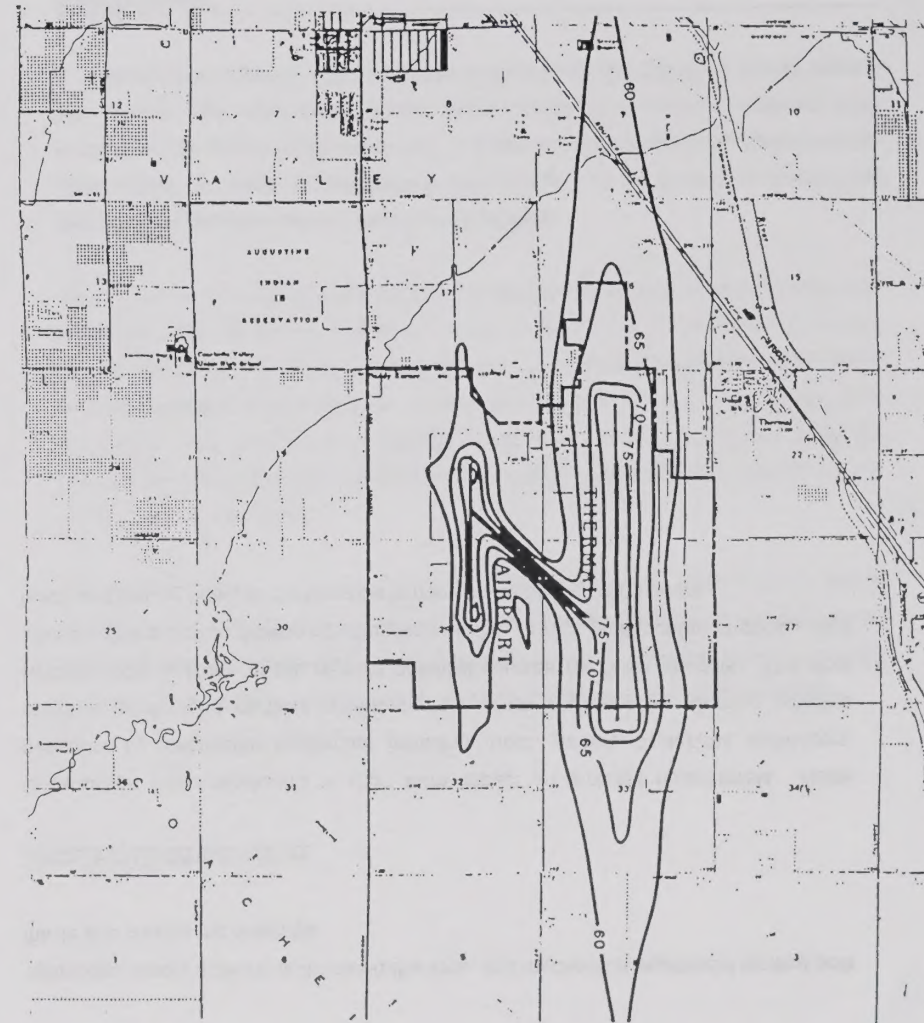
The "Assessment of Noise Environments Around Railroad Operations," (Wyle Laboratories Report WCR-73-5, July, 1973) was used to model the train noise level impacts. The noise generated by a train pass-by can be divided into two components; that generated by the engine or locomotive, and that due to the railroad cars. The noise generated by the engine is the result of the mechanical movements of the engine parts, the combustion process, the horn if used, and to a lesser extent the exhaust system. The noise generated by the cars is a result of the interaction between the wheels and the railroad tracks. A zero source height is used for the car noise, and a source height of 10 feet above the track is utilized for the locomotive. The train noise levels are calculated by adding the noise generated by the locomotive and the noise generated by the cars.

The projected number of future rail operations and other input data were obtained from Allen Havens of SCAG and are presented in Table 12. At a distance of 100 feet from the tracks, the Union Pacific Rail Line will produce an unmitigated noise level of 75.1 dBA CNEL. Appendix "D" includes the worksheets used to compute the expected railroad noise levels in accordance with the Wyle Laboratories Report WCR 73-5.

Commercial/Industrial Noise

In general, commercial and industrial noise within the City of La Quinta is not considered excessive. However, special awareness of noise compatibility issues should be given to residential locations adjacent to Commercial/industrial areas. The noise impacts associated with Commercial/industrial areas include, noise generated by loading dock

EXHIBIT E THERMAL AIRPORT NOISE CONTOUR BOUNDARIES



SOURCE: THERMAL AIRPORT EIR PREPARED FOR
THE RIVERSIDE COUNTY ECONOMIC
DEVELOPMENT AGENCY

TABLE 12

RAILROAD POST 2020 NOISE PREDICTION INPUT DATA

RAILROAD	NUMBER			LENGTH (IN FEET)	SPEED (MPH)	DAILY OPERATIONS ¹
	ENGINES	FREIGHT CARS	PASSENGER CARS			
Amtrak	1		8	765	60	2
Freight	4	60		5,200	70	40

operations, trucks entering and leaving the area, and mechanical equipment located both inside and outside the buildings.

Short-Term Construction Noise

Construction noise represents a short term impact on ambient noise levels. Noise generated by construction equipment, including trucks, graders, back-hoes, bull-dozer, concrete mixers and portable generators can reach high levels. Grading activities typically represent one of the highest potential sources for noise impacts. The most effective method of controlling construction noise is through local control of construction hours and limiting hours of construction to normal weekday working hours.

¹ Source: Alan Havens, SCAG

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CONCLUSIONS

A noise element technical report has been completed for the City of La Quinta General Plan Update. This noise study includes noise monitoring of ambient conditions along roadways in the vicinity of the community, a review of noise measurements from previous noise studies, a review of local agency requirements and an analysis of existing and General Plan "Buildout" future roadway noise impacts.

The current City of La Quinta General Plan Noise Element requires an exterior noise level of 60 dBA CNEL for noise sensitive land uses. As the City of La Quinta has grown, the 60 dBA CNEL noise exposure limit has become more and more difficult to attain without substantial exterior noise mitigation. Many of the surrounding desert communities allow an exterior noise level of up to 65 dBA CNEL provided that the exterior areas are substantially mitigated and the interior noise exposures do not exceed 45 dBA CNEL with windows and doors closed.

The City of La Quinta should continue to use the 60 dBA CNEL noise exposure limit to identify projects that may require noise mitigation. However, the City of La Quinta should permit an exterior noise level of up to 65 dBA CNEL provided that the exterior areas are substantially mitigated and the interior noise exposures do not exceed 45 dBA CNEL.

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CITY OF LA QUINTA NOISE ORDINANCE

9.60.210

residential zones

D. The use of a recreational vehicle as a construction or guard office shall require approval of a minor use permit by the director in accordance with Section 9.210.020. (Ord. 284 § 1 (Exh. A) (part), 1996)

9.60.220 Trash and recyclable materials storage.

All condominium and multifamily projects shall comply with the nonresidential trash and recyclable materials storage requirements of Section 9.100.200. (Ord. 284 § 1 (Exh. A) (part), 1996)

9.60.230 Noise control.

Residential land uses shall comply with the nonresidential noise control standards set forth in Section 9.100.210. (Ord. 284 § 1 (Exh. A) (part), 1996)

9.60.240 Landscaping and open area.

A. General Requirement. All multifamily, single-family attached and specific plan projects shall include both perimeter landscaping and common open area in accordance with the standards of this section. Perimeter landscaping shall not count toward common open area requirements or vice versa.

B. Perimeter Landscaping. Perimeter landscape setbacks shall be installed to the depth specified in Section 9.50.030 (Table of development standards). Rights-of-way, parking areas, private patios and private yards shall not count toward the perimeter landscaping requirement.

C. Common Open Area. Common open area shall meet the percent of net project area standards specified in Section 9.50.030 (Table of development standards). Common open area shall consist of passive landscaped and active recreation area. Rights-of-way, parking areas, private patios, private yards and slopes steeper than twenty percent shall not count toward the common open area requirement.

D. Active Recreation Area. At least thirty percent of the required common open area shall be suitable for active recreational uses such as: swimming pool, spa and related facilities; clubhouse; tot lot with play equipment; court game facilities such as tennis, basketball or racquetball; improved softball or other playfields; or similar facilities for active recreational use. Active recreation area shall not include any common area which is less than fifteen feet wide or less than three hundred square feet in area or which has an average slope gradient greater than five percent.

E. Landscaping Standards. A landscape plan shall be prepared and implemented for all affected projects. Perimeter and common open area landscaping shall be installed and maintained in accordance with the following standards:

1. Height of landscaping along all streets and boundaries shall comply with Section 9.60.030 (Fences and walls).

2. All landscaped areas shall be separated from adjacent parking or vehicular areas by a curb or other barrier at least six inches higher than the parking or vehicular area to prevent vehicular damage to the landscaped area.

3. All landscaping shall be maintained in a neat, clean and healthy condition, including proper pruning, mowing of lawns, weeding, removal of litter, fertilizing, replacement of plants when necessary and regular watering. Permanent automatic irrigation facilities shall be provided for all landscaped areas.

F. Perimeter setback and parkway areas shall have undulating terrain. Seventy-five percent of the longitudinal length adjacent to the street shall have above curb-level berms and mounds exceeding two feet, but not more than three feet. The berms and mounds shall be undulated and fluctuating in position to accommodate the meandering sidewalk and shall cover not less than sixty-five percent of the landscape setback area. No retention of stormwaters is allowed within the setback area other than incidental stormwater that falls on the setback. The maximum slope steepness shall not exceed four to one anywhere in the landscape setback area, and shall not exceed eight to one in the first six feet adjacent to the curb in the right-of-way. (Ord. 325 § 1 (Exh. A) (part), 1998; Ord. 284 § 1 (Exh. A) (part), 1996)

9.60.250 Model home complexes.

A. Model Home Complex and Sales Offices. Temporary model home complexes, real estate sales offices and related signage may be established if a minor use permit is approved in accordance with Section 9.210.020 and the following requirements are satisfied:

1. The complex is used solely for the original sale of new homes or the first rental of apartments in projects of twenty or more units.

Commercial zones

9.100.200

Enclosure walls shall be at least six feet high and shall be made of strong, durable materials consistent with the colors and finishes of nearby buildings. Doors shall be self-latching, metal or metal-framed, and of heavy duty construction sufficient to withstand hard usage. Interior concrete or metal curbs shall be included to prevent damage to the enclosures walls from collisions with large, heavy containers. Decorative overhead structures such as trellises shall be integrated into the design if the enclosure is visible from higher terrain.

3. Trash Areas. All outdoor trash and waste bins shall be enclosed by a solid wall not less than six feet in height in accordance with this section. Gates shall not open toward a public street. Decorative overhead structures such as metal trellises shall be integrated into the enclosure design or tall landscaping planted on the affected side if it is visible from higher terrain or buildings.

E. Weather Protection. Each enclosure or individual container shall be designed and maintained so that deposited materials are contained during windy periods. Enclosures or containers designated for recyclable materials which could be damaged or be rendered unmarketable by rain or other environmental conditions shall provide adequate protection against such conditions.

F. Maintenance. Each enclosure shall be maintained to preserve its appearance and function and to minimize litter, odor and other nuisances. Trash and recyclables shall be collected regularly. (Ord. 284 § 1 (Exh. A, B) (part) 1996)

9.100.210 Noise control.

A. Purpose. The noise control standards for nonresidential land use districts set forth in this section are established to prevent excessive sound levels which are detrimental to the public health, welfare and safety or which are contrary to the public interest.

B. Noise Standards. Exterior noise standards are set forth below. Residential property, schools, hospitals, and churches are considered noise sensitive land uses, regardless of the land use district in which they are located. All other uses shall comply with the "other nonresidential" standard. All noise measurements shall be taken using standard noise measuring instruments. Measurements shall be taken within the receiving property at locations determined by director to be most appropriate to the individual situation.

Exterior Noise Standards

Receiving Land Use	Noise Standard	Time Period
Noise sensitive	60 dB(A)	7:00 a.m.—10:00 p.m.
	50 dB(A)	10:00 p.m.—7:00 a.m.
Other nonresidential	75 dB(A)	7:00 a.m.—10:00 p.m.
	65 dB(A)	10:00 p.m.—7:00 a.m.

If the noise consists entirely of impact noise, simple tone noise, speech or music, or any combination thereof, each of the noise levels specified in the table in this section shall be reduced by five dB(A).

C. Noise Limits. It is unlawful for any person at any location within the city to create any noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, when such noise causes the noise level, when measured on any adjacent property, to exceed:

1. The noise standard for a cumulative period of more than thirty minutes in any hour;
 2. The noise standard plus five dB(A) for a cumulative period of more than fifteen minutes in any hour;
 3. The noise standard plus ten dB(A) for a cumulative period of more than five minutes in any hour;
 4. The noise standard plus fifteen dB(A) for a cumulative period of more than one minute in any hour;
- or
5. The noise standard plus twenty dB(A) for any period of time.

6. For purposes of this section, the term "cumulative period" means the number of minutes that a noise occurs within any hour, whether such minutes are consecutive or not.

D. Ambient Noise Level. If the ambient or background noise level exceeds any of the preceding noise categories, no increase above such ambient noise level shall be permitted.

E. Exemptions. The following are exempt from the noise restrictions of this section:

1. Emergency vehicles or other emergency operations.
2. City maintenance, construction or similar activities.

9.100.210

3. Construction activities regulated by Section 6.08.050 of the La Quinta Municipal Code.

F. Enforcement. The city building official shall have the responsibility and authority to enforce the provisions of this section. (Ord. 284 § 1 (Exh. A) (part), 1996)

9.100.220 Operational standards.

All uses and developed properties within any nonresidential district shall comply with the following standards for development, operation and maintenance.

A. Equipment. All ground-mounted mechanical equipment, including heating and air conditioning units and trash receptacle areas, shall be completely screened from surrounding properties. Such screening shall consist of perimeter walls or fencing (if permitted), screen walls, or dense landscaping.

B. Utilities. All utility connections shall be designed to coordinate with the architectural elements of the site so as not to be exposed except where required by utility provider.

C. Electrical Disturbance, Heat and Cold, Glare. No use except a temporary construction operation shall be permitted which creates changes in temperature or direct glare, detectable by the human senses without the aid of instruments, beyond the boundaries of the site. No use shall be permitted which creates electrical disturbances that affect the operation of any equipment beyond the boundaries of the lot.

D. Fire and Explosive Hazard. All storage of and activities involving inflammable and explosive materials shall be provided with adequate safety and firefighting devices to the specifications of the Uniform Fire Code. All incineration is prohibited. Smoke detectors shall be installed in all new construction as required by city code.

E. Radioactivity. In all nonresidential districts, the use of radioactive materials shall be limited to measuring, gauging and calibration devices, and medical X-ray diagnostic equipment.

F. Vibration. No use except a temporary construction operation shall be permitted which generates inherent and recurrent ground vibration perceptible, without instruments, at the boundary of the lot on which the use is located.

G. Energy Conservation. Buildings shall be located on the site to provide adjacent buildings adequate sunlight for solar access. Buildings should be designed to minimize energy consumption.

H. Toxic Materials. No land or building shall be used or occupied in any manner which creates an unhealthful, dangerous, noxious or otherwise objectionable condition due to the use, storage or proximity to toxic materials.

I. Liquid or Solid Waste. No discharge of liquid or solid wastes, at any point into public sewer, private sewage system, stream, storm drain or into the ground shall be permitted, except in accordance with the standards approved by the State Department of Health and/or specified by the sewage utility provider. No materials or wastes shall be deposited on any property in such form or manner that they may be transferred off the property by natural causes or forces, such as wind or rain. Any wastes which could be attractive to rodents or insects shall be stored outdoors only in closed containers. (Ord. 284 § 1 (Exh. A) (part), 1996)

9.100.230 Hazardous waste and materials.

A. Purpose. This section provides regulations to satisfy the requirements of State Health and Safety Code Section 25100 et seq. and State Administrative Code Title 22 regarding the handling and disposal of hazardous waste and materials.

B. Hazardous Materials. In addition to the requirements for each zoning district, the following requirements apply to the land uses listed in subsection C of this section:

1. Hazardous Waste Management. Prior to issuance of a certificate of occupancy for any land use listed in subsection C of this section, the applicant shall provide plans and identify measures to comply with applicable regulations in a manner approved by all health and sewerage agencies.

2. Underground Storage Tanks. Prior to issuance of a certificate of occupancy for any land use which includes underground tanks to store any hazardous materials, the applicant shall provide plans or identify measures to comply with applicable regulations in a manner approved by the health agency.

C. Applicability. The requirements of subsection B of this section pertaining to hazardous materials shall apply to the following land uses:

1. Automotive and vehicle maintenance, repair or painting.
2. Chemical and commercial cleaning product distribution or sales.
3. Cleaners, self-service laundries and vehicle washes.
4. Home improvement product, lumber and hardware sales.

APPENDIX B

VEHICLE AXLE COUNTS

TABLE 1

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	18785	4664	3066	26515
MEDIUM TRUCKS	290	90	87	467
HEAVY TRUCKS	101	24	26	151
				27133

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	70.85%	17.59%	11.56%	97.72%
MEDIUM TRUCKS	62.10%	19.27%	18.63%	1.72%
HEAVY TRUCKS	66.89%	15.89%	17.22%	0.56%

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

City: La Quinta
 Location: 42nd Street East of Adams
 Date: 9/9/99 Thursday

06320001

	NORTHBOUND					SOUTHBOUND				
	CARS	2-AXLE TRUCKS	3-AXLE TRUCKS	4-AXLE TRUCKS	5-AXLE + TRUCKS	CARS	2-AXLE TRUCKS	3-AXLE TRUCKS	4-AXLE TRUCKS	5-AXLE + TRUCKS
12:00 AM	16	0	0	0	0	39	0	0	0	0
15 AM	10	0	0	0	0	31	0	0	0	0
30 AM	14	0	0	0	0	24	0	0	0	0
45 AM	4	0	0	0	0	21	0	0	0	0
1:00 AM	7	0	0	0	0	24	1	0	0	0
15 AM	7	0	0	0	0	11	0	0	0	0
30 AM	10	0	0	0	0	9	0	0	0	0
45 AM	8	0	0	0	0	12	0	0	0	0
2:00 AM	7	0	0	0	0	16	0	0	0	0
15 AM	4	0	0	0	0	13	0	0	0	0
30 AM	4	1	0	0	0	14	0	0	0	0
45 AM	2	0	0	0	0	12	0	0	0	0
3:00 AM	5	0	0	0	0	8	0	0	0	0
15 AM	3	0	0	0	0	7	0	0	0	0
30 AM	1	0	1	0	0	5	0	0	0	0
45 AM	3	0	0	0	0	11	0	0	0	0
4:00 AM	0	0	0	0	0	7	0	0	0	0
15 AM	2	0	0	0	0	4	0	0	0	0
30 AM	3	0	0	0	0	6	0	0	0	0
45 AM	2	0	0	0	0	5	0	1	0	0
5:00 AM	0	0	0	0	0	5	0	0	0	0
15 AM	3	0	0	0	0	13	0	0	0	0
30 AM	6	0	1	0	0	13	1	0	0	0
45 AM	12	1	0	0	0	29	2	0	0	0
6:00 AM	5	2	0	0	0	26	0	0	0	0
15 AM	13	0	0	0	0	33	0	0	0	0
30 AM	10	0	0	0	0	31	1	0	0	0
45 AM	11	0	0	0	0	59	2	0	0	0
7:00 AM	23	0	0	0	0	57	0	1	0	0
15 AM	17	1	0	0	0	62	3	0	0	0
30 AM	42	2	0	0	0	75	2	0	0	0
45 AM	26	0	1	0	0	116	0	0	0	0
8:00 AM	27	0	3	0	0	71	0	0	0	0
15 AM	32	1	0	0	0	64	0	0	0	0
30 AM	38	2	0	0	0	71	1	0	0	0
45 AM	27	0	0	0	0	88	0	0	0	0
9:00 AM	38	0	0	0	0	89	0	1	0	0
15 AM	26	1	0	0	0	85	0	0	0	0
30 AM	20	1	0	0	0	84	2	0	0	0
45 AM	30	0	0	0	0	114	1	0	0	0
10:00 AM	42	1	0	0	0	49	0	0	0	0
15 AM	36	0	0	0	0	46	0	0	0	0
30 AM	38	1	0	0	0	40	1	1	0	0
45 AM	33	0	0	0	0	40	0	0	0	0
11:00 AM	38	0	0	0	0	35	0	0	0	0
15 AM	42	0	0	0	0	43	0	0	0	0
30 AM	43	0	0	0	0	44	0	0	0	0
45 AM	37	0	0	0	0	41	0	0	0	0
TOTALS	827	14	6	0	0	1802	17	4	0	0

SOUTHLAND CAR COUNTERS

City: La Quinta
 Location: 42nd Street East of Adams
 Date: 9/9/99 Thursday

	NORTHBOUND					SOUTHBOUND				
	CARS	2-AXLE TRUCKS	3-AXLE TRUCKS	4-AXLE TRUCKS	5-AXLE + TRUCKS	CARS	2-AXLE TRUCKS	3-AXLE TRUCKS	4-AXLE TRUCKS	5-AXLE + TRUCKS
12:00 PM	36	0	0	0	0	47	0	0	0	0
15 PM	44	0	0	0	0	28	0	0	0	0
30 PM	43	0	0	0	0	35	0	0	0	0
45 PM	40	1	0	0	0	34	0	0	0	0
1:00 PM	51	2	0	0	0	47	0	0	0	0
15 PM	44	2	0	0	0	30	0	0	0	0
30 PM	53	0	0	0	0	51	0	1	0	0
45 PM	38	0	1	0	0	42	0	2	0	0
2:00 PM	46	0	0	0	0	35	0	0	0	0
15 PM	44	0	0	0	0	39	0	0	0	0
30 PM	90	1	1	0	0	52	2	0	0	0
45 PM	104	2	0	0	0	62	1	0	0	0
3:00 PM	89	0	0	0	0	63	0	0	0	0
15 PM	82	0	1	0	0	82	0	0	0	0
30 PM	114	0	0	0	0	81	1	0	0	0
45 PM	106	2	0	0	0	58	2	0	0	0
4:00 PM	104	1	0	0	0	51	0	0	0	0
15 PM	104	2	0	0	0	50	3	1	0	0
30 PM	85	3	1	0	0	50	0	0	0	0
45 PM	75	0	2	0	0	65	2	0	0	0
5:00 PM	82	0	0	0	0	47	1	0	0	0
15 PM	102	0	1	0	0	56	0	0	0	0
30 PM	88	1	0	0	0	63	0	0	0	0
45 PM	85	2	0	0	0	56	2	0	0	0
6:00 PM	73	0	0	0	0	56	1	0	0	0
15 PM	63	0	0	0	0	54	0	0	0	0
30 PM	54	0	0	0	0	32	0	0	0	0
45 PM	44	1	0	0	0	38	0	1	0	0
7:00 PM	40	2	0	0	0	40	2	0	0	0
15 PM	44	3	1	0	0	52	1	0	0	0
30 PM	35	2	0	0	0	39	0	0	0	0
45 PM	26	0	0	0	0	30	0	0	0	0
8:00 PM	26	2	0	0	0	29	0	0	0	0
15 PM	34	1	0	0	0	20	1	0	0	0
30 PM	35	0	0	0	0	18	0	0	0	0
45 PM	32	0	0	0	0	19	0	0	0	0
9:00 PM	19	0	0	0	0	23	2	0	0	0
15 PM	35	0	1	0	0	18	0	0	0	0
30 PM	31	1	0	0	0	17	0	0	0	0
45 PM	25	0	0	0	0	19	0	0	0	0
10:00 PM	17	0	0	0	0	19	1	1	0	0
15 PM	30	0	0	0	0	19	0	0	0	0
30 PM	19	0	0	0	0	27	0	0	0	0
45 PM	24	0	0	0	0	12	0	0	0	0
11:00 PM	18	0	0	0	0	13	0	0	0	0
15 PM	13	0	0	0	0	7	0	0	0	0
30 PM	17	1	0	0	0	12	0	0	0	0
45 PM	11	1	0	0	0	9	0	0	0	0
TOTALS	2514	33	9	0	0	1846	22	6	0	0

SOUTHLAND CAR COUNTERS

City: La Quinta
 Location: Washington n/o Ave 50Th St
 Date: 9/9/99 Thursday

06320002

	NORTHBOUND					SOUTHBOUND				
	CARS	2-AXLE TRUCKS	3-AXLE TRUCKS	4-AXLE TRUCKS	5-AXLE + TRUCKS	CARS	2-AXLE TRUCKS	3-AXLE TRUCKS	4-AXLE TRUCKS	5-AXLE + TRUCKS
12:00 AM	16	0	0	0	0	39	0	0	0	0
15 AM	8	0	0	0	0	31	0	0	0	0
30 AM	9	0	0	0	0	24	0	0	0	0
45 AM	7	0	0	0	0	21	0	0	0	0
1:00 AM	7	0	0	0	0	24	1	0	0	0
15 AM	4	0	0	0	0	11	0	0	0	0
30 AM	6	0	0	0	0	9	0	0	0	0
45 AM	8	0	0	0	0	12	0	0	0	0
2:00 AM	4	0	0	0	0	16	0	0	0	0
15 AM	8	0	0	0	0	13	0	0	0	0
30 AM	10	0	0	0	0	14	0	0	0	0
45 AM	5	0	0	0	0	12	0	0	0	0
3:00 AM	5	0	0	0	0	8	0	0	0	0
15 AM	7	0	0	0	0	7	0	0	0	0
30 AM	5	0	0	1	0	5	0	0	0	0
45 AM	4	0	1	0	0	11	0	0	0	0
4:00 AM	9	0	0	0	0	7	0	0	0	0
15 AM	15	0	0	0	0	4	0	0	0	0
30 AM	16	0	2	0	0	6	0	0	0	0
45 AM	7	0	0	0	0	5	0	1	0	0
5:00 AM	26	1	1	0	0	5	0	0	0	0
15 AM	24	2	0	0	0	13	0	2	0	0
30 AM	32	0	0	1	0	13	2	0	1	0
45 AM	40	0	0	0	0	29	4	0	0	0
6:00 AM	27	2	0	0	0	26	5	0	0	0
15 AM	36	3	0	0	0	33	3	0	0	0
30 AM	68	4	0	2	0	31	2	0	0	0
45 AM	60	2	1	0	0	59	1	1	0	0
7:00 AM	60	0	0	0	0	57	0	0	0	0
15 AM	89	0	0	0	0	62	0	0	0	0
30 AM	97	2	0	0	0	75	0	0	0	0
45 AM	95	3	0	1	0	116	2	1	0	0
8:00 AM	93	4	3	0	0	71	5	2	0	0
15 AM	118	2	0	0	0	64	4	0	0	0
30 AM	111	0	0	1	0	71	3	0	0	0
45 AM	121	2	2	0	0	88	0	0	0	0
9:00 AM	115	6	1	0	0	89	0	0	0	0
15 AM	106	2	0	0	0	85	2	1	0	0
30 AM	112	0	0	0	0	84	2	2	0	0
45 AM	127	0	2	0	0	114	4	0	2	0
10:00 AM	104	2	0	0	0	100	3	0	0	0
15 AM	101	3	0	0	0	93	2	1	1	0
30 AM	111	4	0	0	0	98	0	2	0	0
45 AM	118	2	1	0	0	111	0	1	0	0
11:00 AM	105	0	0	0	0	117	2	0	0	0
15 AM	118	1	0	0	0	108	3	1	0	0
30 AM	109	2	0	0	0	99	2	0	0	0
45 AM	114	0	0	0	0	107	0	0	0	0
TOTALS	2597	49	14	6	0	2297	52	15	4	0

SOUTHLAND CAR COUNTERS

City: La Quinta
 Location: Washington n/o Ave 50Th St
 Date: 9/9/99 Thursday

	NORTHBOUND					SOUTHBOUND				
	CARS	2-AXLE TRUCKS	3-AXLE TRUCKS	4-AXLE TRUCKS	5-AXLE + TRUCKS	CARS	2-AXLE TRUCKS	3-AXLE TRUCKS	4-AXLE TRUCKS	5-AXLE + TRUCKS
12:00 PM	130	4	0	0	0	100	1	0	0	0
15 PM	123	2	0	0	0	112	1	0	0	0
30 PM	106	3	0	0	0	123	2	0	0	0
45 PM	108	5	0	0	0	125	0	0	0	0
1:00 PM	112	2	0	0	0	126	2	0	0	0
15 PM	135	3	1	0	0	118	1	0	0	0
30 PM	126	2	0	0	0	108	0	1	0	0
45 PM	83	0	1	0	0	106	0	2	0	0
2:00 PM	100	0	0	0	0	119	3	0	0	0
15 PM	122	2	0	0	0	109	1	0	0	0
30 PM	133	3	0	0	0	131	2	0	0	0
45 PM	139	4	1	0	0	146	0	0	1	0
3:00 PM	147	2	0	0	0	169	2	2	0	0
15 PM	141	4	0	0	0	177	4	1	0	0
30 PM	194	3	1	0	0	166	2	0	0	0
45 PM	136	2	3	0	0	148	3	2	0	0
4:00 PM	128	0	2	1	0	153	3	0	0	0
15 PM	135	0	0	0	0	175	0	3	0	0
30 PM	112	3	0	0	0	171	0	2	1	0
45 PM	107	4	2	0	0	169	3	2	0	0
5:00 PM	147	2	0	0	0	185	5	0	0	0
15 PM	151	3	2	0	0	186	4	0	1	0
30 PM	123	0	1	0	0	192	3	1	0	0
45 PM	105	2	0	0	0	157	0	0	1	0
6:00 PM	114	3	0	0	0	124	0	0	0	0
15 PM	111	4	0	0	0	160	2	0	0	0
30 PM	104	2	0	0	0	133	3	0	0	0
45 PM	96	0	1	2	0	127	2	0	0	0
7:00 PM	102	2	0	0	0	135	0	0	0	0
15 PM	89	3	0	0	0	144	5	0	0	0
30 PM	82	0	2	0	0	115	2	0	0	0
45 PM	73	0	0	0	0	115	4	1	0	0
8:00 PM	72	4	1	0	0	99	2	0	0	0
15 PM	68	2	0	0	0	113	1	0	0	0
30 PM	53	0	0	0	0	96	2	0	0	0
45 PM	52	0	0	1	0	77	3	1	0	0
9:00 PM	41	1	2	0	0	81	2	2	0	0
15 PM	59	1	1	0	0	70	0	0	0	0
30 PM	45	0	0	0	0	81	1	0	0	0
45 PM	27	1	0	0	1	68	3	0	0	0
10:00 PM	37	2	0	1	0	80	2	0	0	0
15 PM	33	0	0	0	0	79	0	0	0	0
30 PM	47	1	2	0	0	60	0	0	0	0
45 PM	39	0	0	0	0	61	0	0	0	0
11:00 PM	18	0	1	0	0	49	0	0	1	0
15 PM	19	0	0	1	0	55	1	0	0	0
30 PM	26	1	0	0	0	50	0	0	0	0
45 PM	17	1	0	0	0	47	0	0	0	0
TOTALS	4467	83	24	6	1	5690	77	20	5	0

SOUTHLAND CAR COUNTERS

City: La Quinta
Location: Jefferson n/o Ave 54
Date: 9/9/99 Thursday

06320003

	NORTHBOUND					SOUTHBOUND				
	CARS	2-AXLE TRUCKS	3-AXLE TRUCKS	4-AXLE TRUCKS	5-AXLE + TRUCKS	CARS	2-AXLE TRUCKS	3-AXLE TRUCKS	4-AXLE TRUCKS	5-AXLE + TRUCKS
12:00 AM	3	0	0	0	0	4	0	0	0	0
15 AM	0	0	0	0	0	4	0	0	0	0
30 AM	0	0	0	0	0	7	0	0	0	0
45 AM	3	0	0	0	0	4	0	0	0	0
1:00 AM	4	0	0	0	0	3	1	0	0	0
15 AM	2	1	0	0	0	1	0	0	0	0
30 AM	1	0	0	0	0	0	0	0	0	0
45 AM	4	0	0	0	0	4	0	0	0	0
2:00 AM	0	0	0	0	0	3	0	0	0	0
15 AM	0	0	0	0	0	1	0	0	0	0
30 AM	1	1	0	0	0	1	0	0	0	0
45 AM	0	0	0	0	0	2	1	0	0	0
3:00 AM	0	0	0	0	0	1	0	0	0	0
15 AM	1	0	0	0	0	2	0	0	0	0
30 AM	0	0	0	0	0	1	0	0	0	0
45 AM	1	0	0	0	0	0	0	0	0	0
4:00 AM	1	0	0	0	0	2	0	0	0	0
15 AM	0	0	0	0	0	3	3	0	0	0
30 AM	0	0	0	0	0	3	2	0	0	0
45 AM	2	0	0	0	0	5	0	0	0	0
5:00 AM	4	1	0	0	0	4	0	0	0	0
15 AM	4	0	0	0	0	13	1	0	0	0
30 AM	5	0	0	0	0	25	0	0	0	0
45 AM	4	0	0	0	0	24	0	0	0	0
6:00 AM	9	0	1	0	0	25	0	0	0	0
15 AM	18	2	0	0	0	21	4	0	1	0
30 AM	28	3	0	0	0	33	3	0	0	0
45 AM	12	6	0	0	0	38	2	0	0	0
7:00 AM	18	2	0	0	0	42	0	0	0	0
15 AM	21	0	2	0	0	36	0	0	0	0
30 AM	9	0	0	0	0	57	0	0	0	0
45 AM	11	1	1	1	0	60	2	1	1	0
8:00 AM	15	2	0	0	0	75	0	1	0	0
15 AM	27	0	0	0	0	37	1	0	1	0
30 AM	33	2	0	0	0	29	2	0	0	0
45 AM	21	3	0	0	0	49	3	0	0	0
9:00 AM	20	1	1	0	0	35	0	0	0	0
15 AM	24	2	0	0	0	36	0	2	0	0
30 AM	30	4	0	0	0	29	0	0	0	0
45 AM	41	2	0	0	0	40	2	0	0	0
10:00 AM	42	0	0	0	0	30	1	0	0	0
15 AM	21	0	1	0	0	55	0	0	0	0
30 AM	18	1	0	0	0	39	0	1	0	0
45 AM	19	0	0	0	0	54	1	1	0	0
11:00 AM	28	0	0	0	0	32	0	0	1	0
15 AM	27	0	0	0	0	45	1	1	0	0
30 AM	59	0	0	0	0	40	2	0	0	0
45 AM	29	0	0	0	0	40	0	0	0	0
TOTALS	620	34	6	1	0	1094	32	7	4	0

SOUTHLAND CAR COUNTERS

City: La Quinta
Location: Jefferson n/o Ave 54
Date: 9/9/99 Thursday

	NORTHBOUND					SOUTHBOUND				
	CARS	2-AXLE TRUCKS	3-AXLE TRUCKS	4-AXLE TRUCKS	5-AXLE + TRUCKS	CARS	2-AXLE TRUCKS	3-AXLE TRUCKS	4-AXLE TRUCKS	5-AXLE + TRUCKS
12:00 PM	25	0	0	0	0	38	0	0	0	0
15 PM	47	0	0	0	0	36	1	0	0	0
30 PM	26	1	0	0	0	43	0	0	0	0
45 PM	32	0	0	0	0	42	2	0	0	0
1:00 PM	36	2	0	0	0	38	0	0	0	0
15 PM	27	0	0	0	0	31	0	0	0	0
30 PM	31	0	0	0	0	30	0	0	0	0
45 PM	37	0	0	0	0	33	1	0	0	0
2:00 PM	38	0	0	0	0	40	2	0	0	0
15 PM	21	0	0	0	0	34	0	0	0	0
30 PM	40	3	0	0	0	40	0	0	0	0
45 PM	44	0	0	0	0	35	0	0	1	0
3:00 PM	73	2	0	0	0	71	0	0	0	0
15 PM	55	4	0	1	0	60	1	1	0	0
30 PM	61	0	1	0	0	66	0	0	0	0
45 PM	51	2	0	0	0	47	0	0	0	0
4:00 PM	50	0	0	0	0	45	1	0	0	0
15 PM	55	0	0	0	0	45	2	0	0	0
30 PM	42	1	0	0	0	37	0	0	0	0
45 PM	44	2	1	0	0	38	0	0	0	0
5:00 PM	51	3	0	0	0	37	1	0	0	0
15 PM	62	4	0	0	0	37	1	0	0	0
30 PM	29	0	0	0	0	39	0	1	0	0
45 PM	33	0	0	0	0	51	0	1	0	0
6:00 PM	27	2	0	0	0	43	1	0	0	0
15 PM	27	0	0	0	0	36	1	0	0	0
30 PM	40	1	0	0	0	28	0	0	0	0
45 PM	27	0	1	0	0	26	1	3	0	0
7:00 PM	21	1	0	0	1	28	0	0	0	0
15 PM	13	0	0	0	0	20	0	0	0	0
30 PM	18	0	0	0	0	21	0	0	0	0
45 PM	18	0	0	0	0	19	1	1	0	0
8:00 PM	10	2	0	0	0	16	0	0	0	0
15 PM	15	0	0	0	0	25	0	0	0	0
30 PM	3	1	0	0	0	17	0	0	0	0
45 PM	10	0	0	0	0	17	3	0	0	0
9:00 PM	5	0	0	0	0	19	1	0	0	0
15 PM	5	0	0	0	0	15	0	0	0	0
30 PM	6	1	0	0	0	23	0	0	0	0
45 PM	2	0	0	0	0	18	0	0	0	0
10:00 PM	5	0	0	0	0	21	2	0	0	0
15 PM	8	0	0	0	0	19	0	0	0	0
30 PM	0	0	0	0	0	19	0	0	0	0
45 PM	0	0	0	0	0	13	0	0	0	0
11:00 PM	0	0	0	0	0	8	0	0	0	0
15 PM	3	0	0	0	0	8	0	0	0	0
30 PM	4	0	0	0	0	2	0	0	0	0
45 PM	2	0	0	0	0	8	0	0	0	0
TOTALS	1279	32	3	1	1	1482	22	7	1	0

SOUTHLAND CAR COUNTERS

APPENDIX C

ROADWAY CNEL COMPUTER PRINTOUTS

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT:	GENERAL PLAN NOISE ELEMENT UPDATE	JN:	0341-98-05
ROADWAY:	Washington St.	DATE:	21-Sep-00
SEGMENT:	n/o 42nd Ave.	BY:	B. LAWSON
LOCATION:	City of La Quinta		
SCENARIO:	EXISTING CONDITIONS		

ADT	24,000 ADT	PK HR VOL	2,400
SPEED	45 MPH		
PK HR	10 %		
DIST CTL	100 FT		
DIST N/F	78 FT (M=76,P=52,S=36)	AUTO SLE DISTANCE	92.2
DIST WALL	0 FT	MED TRUCK SLE DIST	92.1
DIST W/OB	100 FT	HVY TRUCK SLE DIST	92.1
HTH WALL	0 FT		
HTH OBS	5 FT		

ROADWAY VIEW:

LF ANGLE	-90 DGR
RT ANGLE	90 DGR
DF ANGLE	180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES	15
MED TRUCKS	15
HVY TRUCKS	15
BARRIER	0 (0=WALL,1=BERM)

ELEVATIONS:

PAD	0 FT	AUTOMOBILES =	0.00 FT
ROAD	0 FT	MEDIUM TRUCKS =	2.30 FT
		HEAVY TRUCKS =	8.01 FT
GRADE:	0 %	GRADE ADJUSTM	0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	65.0	62.7	62.7	56.1	65.1
MEDIUM TRUCKS	58.5	55.6	56.6	51.6	59.6
HEAVY TRUCKS	58.4	55.9	55.7	51.2	59.2
VEHICULAR NOISE	66.6	64.2	64.3	58.4	67.0

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	63	135	291	627

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Washington St. DATE: 21-Sep-00
 SEGMENT: s/o Avenue 44 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING CONDITIONS

ADT 20,500 ADT PK HR VOL 2,050
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:
 LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)
 AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:
 PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	64.3	62.1	62.0	55.4	64.4
MEDIUM TRUCKS	57.8	54.9	55.9	51.0	58.9
HEAVY TRUCKS	57.7	55.2	55.0	50.5	58.5
VEHICULAR NOISE	65.9	63.5	63.6	57.7	66.3

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	56	122	262	564

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Washington St. DATE: 21-Sep-00
 SEGMENT: s/o Highway 111 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING CONDITIONS

ADT 28,100 ADT PK HR VOL 2,810
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 144 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 69.6
 DIST WALL 0 FT MED TRUCK SLE DIST 69.5
 DIST W/OB 100 FT HVY TRUCK SLE DIST 69.5
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:
 LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)
 AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:
 PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	67.6	65.3	65.2	58.6	67.6
MEDIUM TRUCKS	61.0	58.1	59.1	54.2	62.1
HEAVY TRUCKS	60.9	58.4	58.2	53.8	61.8
VEHICULAR NOISE	69.1	66.7	66.8	60.9	69.5

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	92	199	428	923

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Washington St. DATE: 21-Sep-00
 SEGMENT: n/o Avenue 50 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING CONDITIONS

ADT 21,700 ADT PK HR VOL 2,170
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	64.6	62.3	62.3	55.7	64.6
MEDIUM TRUCKS	58.0	55.2	56.1	51.2	59.1
HEAVY TRUCKS	58.0	55.4	55.2	50.8	58.8
VEHICULAR NOISE	66.2	63.8	63.9	57.9	66.5

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	59	126	272	586

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Washington St. DATE: 21-Sep-00
 SEGMENT: n/o Avenue 52 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING CONDITIONS

ADT 17,200 ADT PK HR VOL 1,720
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	63.6	61.3	61.3	54.7	63.6
MEDIUM TRUCKS	57.0	54.2	55.1	50.2	58.1
HEAVY TRUCKS	57.0	54.4	54.2	49.8	57.8
VEHICULAR NOISE	65.2	62.8	62.8	56.9	65.5

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	50	108	233	502

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Jefferson St. DATE: 21-Sep-00
 SEGMENT: n/o Highway 111 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING CONDITIONS

ADT 10,800 ADT PK HR VOL 1,080
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	61.6	59.3	59.2	52.7	61.6
MEDIUM TRUCKS	55.0	52.2	53.1	48.2	56.1
HEAVY TRUCKS	54.9	52.4	52.2	47.8	55.8
VEHICULAR NOISE	63.1	60.7	60.8	54.9	63.5

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	37	79	171	368

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Jefferson St. DATE: 21-Sep-00
 SEGMENT: s/o Avenue 48 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING CONDITIONS

ADT 11,700 ADT PK HR VOL 1,170
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	61.9	59.6	59.6	53.0	62.0
MEDIUM TRUCKS	55.4	52.5	53.4	48.5	56.5
HEAVY TRUCKS	55.3	52.8	52.5	48.1	56.1
VEHICULAR NOISE	63.5	61.1	61.2	55.3	63.8

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	39	84	180	388

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Madison St. DATE: 21-Sep-00
 SEGMENT: n/o Avenue 52 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING CONDITIONS

ADT 500 ADT PK HR VOL 50
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:
 LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	47.9	45.6	45.6	39.0	48.0
MEDIUM TRUCKS	41.4	38.5	39.4	34.5	42.5
HEAVY TRUCKS	41.3	38.8	38.5	34.1	42.1
VEHICULAR NOISE	49.5	47.1	47.2	41.3	49.8

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	5	10	21	45

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Madison St. DATE: 21-Sep-00
 SEGMENT: s/o Avenue 54 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING CONDITIONS

ADT 0 ADT PK HR VOL 0
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:
 LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
MEDIUM TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
HEAVY TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
VEHICULAR NOISE	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	#NUM!	#NUM!	#NUM!	#NUM!

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Harrison St. DATE: 21-Sep-00
 SEGMENT: s/o Airport Blvd. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING CONDITIONS

ADT 0 ADT PK HR VOL 0
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
MEDIUM TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
HEAVY TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
VEHICULAR NOISE	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!

DISTANCES TO CONTOUR LINES:

	70	65	60	55
NOISE LEVEL:	#NUM!	#NUM!	#NUM!	#NUM!
DISTANCE TO CNEL (FT)	#NUM!	#NUM!	#NUM!	#NUM!

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Harrison St. DATE: 21-Sep-00
 SEGMENT: s/o Avenue 60 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING CONDITIONS

ADT 0 ADT PK HR VOL 0
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
MEDIUM TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
HEAVY TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
VEHICULAR NOISE	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!

DISTANCES TO CONTOUR LINES:

	70	65	60	55
NOISE LEVEL:	#NUM!	#NUM!	#NUM!	#NUM!
DISTANCE TO CNEL (FT)	#NUM!	#NUM!	#NUM!	#NUM!

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: SR-111 DATE: 21-Sep-00
SEGMENT: s/o Avenue 60 BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: EXISTING CONDITIONS

ADT 0 ADT PK HR VOL 0
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
DIST WALL 0 FT MED TRUCK SLE DIST 96.6
DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:
LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)
AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:
PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
MEDIUM TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
HEAVY TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
VEHICULAR NOISE	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	#NUM!	#NUM!	#NUM!	#NUM!

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Avenue 44 DATE: 21-Sep-00
SEGMENT: w/o Jefferson St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: EXISTING CONDITIONS

ADT 0 ADT PK HR VOL 0
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
DIST WALL 0 FT MED TRUCK SLE DIST 96.6
DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:
LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)
AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:
PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
MEDIUM TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
HEAVY TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
VEHICULAR NOISE	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	#NUM!	#NUM!	#NUM!	#NUM!

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Highway 111 DATE: 21-Sep-00
 SEGMENT: w/o Jefferson St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING CONDITIONS

ADT 0 ADT PK HR VOL 0
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
MEDIUM TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
HEAVY TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
VEHICULAR NOISE	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	#NUM!	#NUM!	#NUM!	#NUM!

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 48 DATE: 21-Sep-00
 SEGMENT: w/o Jefferson St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING CONDITIONS

ADT 0 ADT PK HR VOL 0
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
MEDIUM TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
HEAVY TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
VEHICULAR NOISE	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	#NUM!	#NUM!	#NUM!	#NUM!

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 50 DATE: 21-Sep-00
 SEGMENT: w/o Jefferson St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING CONDITIONS

ADT 7,800 ADT PK HR VOL 780
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	59.8	57.6	57.5	50.9	59.9
MEDIUM TRUCKS	53.3	50.4	51.4	46.5	54.4
HEAVY TRUCKS	53.2	50.7	50.5	46.0	54.0
VEHICULAR NOISE	61.4	59.0	59.1	53.2	61.8

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	28	61	131	282

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 50 DATE: 21-Sep-00
 SEGMENT: e/o Jefferson St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING CONDITIONS

ADT 5,900 ADT PK HR VOL 590
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	58.6	56.3	56.3	49.7	58.7
MEDIUM TRUCKS	52.1	49.2	50.2	45.2	53.2
HEAVY TRUCKS	52.0	49.5	49.3	44.8	52.8
VEHICULAR NOISE	60.2	57.8	57.9	52.0	60.6

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	23	51	109	235

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Avenue 52 DATE: 21-Sep-00
SEGMENT: w/o Jefferson St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: EXISTING CONDITIONS

ADT 8,500 ADT PK HR VOL 850
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
DIST WALL 0 FT MED TRUCK SLE DIST 96.6
DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:
LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:
PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	60.2	57.9	57.9	51.3	60.3
MEDIUM TRUCKS	53.7	50.8	51.7	46.8	54.8
HEAVY TRUCKS	53.6	51.1	50.8	46.4	54.4
VEHICULAR NOISE	61.8	59.4	59.5	53.6	62.1

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	30	64	139	299

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Avenue 52 DATE: 21-Sep-00
SEGMENT: e/o Madison St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: EXISTING CONDITIONS

ADT 3,700 ADT PK HR VOL 370
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
DIST WALL 0 FT MED TRUCK SLE DIST 96.6
DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:
LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:
PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	56.6	54.3	54.3	47.7	56.6
MEDIUM TRUCKS	50.1	47.2	48.1	43.2	51.2
HEAVY TRUCKS	50.0	47.4	47.2	42.8	50.8
VEHICULAR NOISE	58.2	55.8	55.9	49.9	58.5

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	17	37	80	172

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 52 DATE: 21-Sep-00
 SEGMENT: w/o Van Buren St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING CONDITIONS

ADT 0 ADT PK HR VOL 0
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
MEDIUM TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
HEAVY TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
VEHICULAR NOISE	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	#NUM!	#NUM!	#NUM!	#NUM!

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Airport Blvd. DATE: 21-Sep-00
 SEGMENT: e/o Madison St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING CONDITIONS

ADT 0 ADT PK HR VOL 0
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
MEDIUM TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
HEAVY TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
VEHICULAR NOISE	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	#NUM!	#NUM!	#NUM!	#NUM!

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Airport Blvd. DATE: 21-Sep-00
 SEGMENT: w/o Van Buren St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING CONDITIONS

ADT 0 ADT PK HR VOL 0
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
MEDIUM TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
HEAVY TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
VEHICULAR NOISE	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!

DISTANCES TO CONTOUR LINES:

	70	65	60	55
NOISE LEVEL:	#NUM!	#NUM!	#NUM!	#NUM!
DISTANCE TO CNEL (FT)	#NUM!	#NUM!	#NUM!	#NUM!

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Airport Blvd. DATE: 21-Sep-00
 SEGMENT: w/o SR-111 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING CONDITIONS

ADT 0 ADT PK HR VOL 0
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
MEDIUM TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
HEAVY TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
VEHICULAR NOISE	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!

DISTANCES TO CONTOUR LINES:

	70	65	60	55
NOISE LEVEL:	#NUM!	#NUM!	#NUM!	#NUM!
DISTANCE TO CNEL (FT)	#NUM!	#NUM!	#NUM!	#NUM!

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT:	GENERAL PLAN NOISE ELEMENT UPDATE	JN:	0341-98-05
ROADWAY:	Avenue 60	DATE:	21-Sep-00
SEGMENT:	w/o Filmore St.	BY:	B. LAWSON
LOCATION:	City of La Quinta		
SCENARIO:	EXISTING CONDITIONS		

ADT	0 ADT	PK HR VOL	0
SPEED	45 MPH		
PK HR	10 %		
DIST CTL	100 FT		
DIST N/F	52 FT (M=76,P=52,S=36)	AUTO SLE DISTANCE	96.7
DIST WALL	0 FT	MED TRUCK SLE DIST	96.6
DIST W/OB	100 FT	HVY TRUCK SLE DIST	96.6
HTH WALL	0 FT		
HTH OBS	5 FT		

ROADWAY VIEW:

LF ANGLE	-90 DGR
RT ANGLE	90 DGR
DF ANGLE	180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES	15
MED TRUCKS	15
HVY TRUCKS	15
BARRIER	0 (0=WALL,1=BERM)

ELEVATIONS:

PAD	0 FT	AUTOMOBILES =	0.00 FT
ROAD	0 FT	MEDIUM TRUCKS =	2.30 FT
		HEAVY TRUCKS =	8.01 FT
GRADE:	0 %	GRADE ADJUSTM	0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
MEDIUM TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
HEAVY TRUCKS	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!
VEHICULAR NOISE	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	#NUM!	#NUM!	#NUM!	#NUM!

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT:	GENERAL PLAN NOISE ELEMENT UPDATE	JN:	0341-98-05
ROADWAY:	Washington St.	DATE:	21-Sep-00
SEGMENT:	n/o 42nd Ave.	BY:	B. LAWSON
LOCATION:	City of La Quinta		
SCENARIO:	RECOMMENDED GENERAL PLAN ALTERNATIVE		

ADT	52,700 ADT	PK HR VOL	5,270
SPEED	45 MPH		
PK HR	10 %		
DIST CTL	100 FT		
DIST N/F	78 FT (M=76,P=52,S=36)	AUTO SLE DISTANCE	92.2
DIST WALL	0 FT	MED TRUCK SLE DIST	92.1
DIST W/OB	100 FT	HVY TRUCK SLE DIST	92.1
HTH WALL	0 FT		
HTH OBS	5 FT		

ROADWAY VIEW:

LF ANGLE	-90 DGR
RT ANGLE	90 DGR
DF ANGLE	180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES	15
MED TRUCKS	15
HVY TRUCKS	15
BARRIER	0 (0=WALL,1=BERM)

ELEVATIONS:

PAD	0 FT	AUTOMOBILES =	0.00 FT
ROAD	0 FT	MEDIUM TRUCKS =	2.30 FT
		HEAVY TRUCKS =	8.01 FT
GRADE:	0 %	GRADE ADJUSTM	0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	68.4	66.2	66.1	59.5	68.5
MEDIUM TRUCKS	61.9	59.0	60.0	55.1	63.0
HEAVY TRUCKS	61.8	59.3	59.1	54.6	62.6
VEHICULAR NOISE	70.0	67.6	67.7	61.8	70.4

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	106	228	491	1059

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Washington St. DATE: 21-Sep-00
 SEGMENT: s/o Avenue 44 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 68,400 ADT PK HR VOL 6,840
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	69.6	67.3	67.3	60.7	69.6
MEDIUM TRUCKS	63.0	60.2	61.1	56.2	64.1
HEAVY TRUCKS	63.0	60.4	60.2	55.8	63.8
VEHICULAR NOISE	71.2	68.8	68.8	62.9	71.5

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	126	271	585	1260

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Washington St. DATE: 21-Sep-00
 SEGMENT: s/o Highway 111 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 67,200 ADT PK HR VOL 6,720
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 144 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 69.6
 DIST WALL 0 FT MED TRUCK SLE DIST 69.5
 DIST W/OB 100 FT HVY TRUCK SLE DIST 69.5
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	71.3	69.1	69.0	62.4	71.4
MEDIUM TRUCKS	64.8	61.9	62.9	58.0	65.9
HEAVY TRUCKS	64.7	62.2	62.0	57.5	65.5
VEHICULAR NOISE	72.9	70.5	70.6	64.7	73.3

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	165	356	766	1650

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Washington St. DATE: 21-Sep-00
 SEGMENT: n/o Avenue 50 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 53,200 ADT PK HR VOL 5,320
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	68.5	66.2	66.2	59.6	68.5
MEDIUM TRUCKS	61.9	59.1	60.0	55.1	63.0
HEAVY TRUCKS	61.9	59.3	59.1	54.7	62.7
VEHICULAR NOISE	70.1	67.7	67.8	61.8	70.4

DISTANCES TO CONTOUR LINES:

	70	65	60	55
NOISE LEVEL:				
DISTANCE TO CNEL (FT)	107	230	494	1065

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Washington St. DATE: 21-Sep-00
 SEGMENT: n/o Avenue 52 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 38,500 ADT PK HR VOL 3,850
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	67.1	64.8	64.8	58.2	67.1
MEDIUM TRUCKS	60.5	57.7	58.6	53.7	61.6
HEAVY TRUCKS	60.5	57.9	57.7	53.3	61.3
VEHICULAR NOISE	68.7	66.3	66.3	60.4	69.0

DISTANCES TO CONTOUR LINES:

	70	65	60	55
NOISE LEVEL:				
DISTANCE TO CNEL (FT)	86	185	399	859

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Jefferson St. DATE: 21-Sep-00
SEGMENT: n/o Highway 111 BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 33,600 ADT PK HR VOL 3,360
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
DIST WALL 0 FT MED TRUCK SLE DIST 92.1
DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:
LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)
AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:
PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	66.5	64.2	64.2	57.6	66.5
MEDIUM TRUCKS	59.9	57.1	58.0	53.1	61.0
HEAVY TRUCKS	59.9	57.3	57.1	52.7	60.7
VEHICULAR NOISE	68.1	65.7	65.8	59.8	68.4

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	78	169	364	784

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Jefferson St. DATE: 21-Sep-00
SEGMENT: s/o Avenue 48 BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 47,300 ADT PK HR VOL 4,730
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
DIST WALL 0 FT MED TRUCK SLE DIST 92.1
DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:
LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)
AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:
PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	68.0	65.7	65.7	59.1	68.0
MEDIUM TRUCKS	61.4	58.6	59.5	54.6	62.5
HEAVY TRUCKS	61.4	58.8	58.6	54.2	62.2
VEHICULAR NOISE	69.6	67.2	67.2	61.3	69.9

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	99	212	457	985

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Madison St. DATE: 21-Sep-00
 SEGMENT: n/o Avenue 52 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 28,200 ADT PK HR VOL 2,820
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	65.4	63.1	63.1	56.5	65.5
MEDIUM TRUCKS	58.9	56.0	57.0	52.0	60.0
HEAVY TRUCKS	58.8	56.3	56.0	51.6	59.6
VEHICULAR NOISE	67.0	64.6	64.7	58.8	67.3

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	67	143	309	665

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Madison St. DATE: 21-Sep-00
 SEGMENT: s/o Avenue 54 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 44,000 ADT PK HR VOL 4,400
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	67.7	65.4	65.3	58.8	67.7
MEDIUM TRUCKS	61.1	58.3	59.2	54.3	62.2
HEAVY TRUCKS	61.0	58.5	58.3	53.9	61.9
VEHICULAR NOISE	69.2	66.8	66.9	61.0	69.6

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	94	202	436	939

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Harrison St. DATE: 21-Sep-00
 SEGMENT: s/o Airport Blvd. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 54,300 ADT PK HR VOL 5,430
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	68.6	66.3	66.3	59.7	68.6
MEDIUM TRUCKS	62.0	59.2	60.1	55.2	63.1
HEAVY TRUCKS	62.0	59.4	59.2	54.8	62.8
VEHICULAR NOISE	70.2	67.8	67.8	61.9	70.5

NOISE LEVEL:

	70	65	60	55
DISTANCE TO CNEL (FT)	108	233	501	1080

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Harrison St. DATE: 21-Sep-00
 SEGMENT: s/o Avenue 60 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 41,600 ADT PK HR VOL 4,160
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	67.4	65.1	65.1	58.5	67.5
MEDIUM TRUCKS	60.9	58.0	59.0	54.0	62.0
HEAVY TRUCKS	60.8	58.3	58.0	53.6	61.6
VEHICULAR NOISE	69.0	66.6	66.7	60.8	69.3

NOISE LEVEL:

	70	65	60	55
DISTANCE TO CNEL (FT)	90	195	420	904

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: SR-111 DATE: 21-Sep-00
 SEGMENT: s/o Avenue 60 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 21,400 ADT PK HR VOL 2,140
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	64.2	61.9	61.9	55.3	64.3
MEDIUM TRUCKS	57.7	54.8	55.8	50.8	58.8
HEAVY TRUCKS	57.6	55.1	54.8	50.4	58.4
VEHICULAR NOISE	65.8	63.4	63.5	57.6	66.1

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	55	119	257	554

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 44 DATE: 21-Sep-00
 SEGMENT: w/o Jefferson St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 31,200 ADT PK HR VOL 3,120
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	65.9	63.6	63.5	57.0	65.9
MEDIUM TRUCKS	59.3	56.5	57.4	52.5	60.4
HEAVY TRUCKS	59.2	56.7	56.5	52.1	60.1
VEHICULAR NOISE	67.4	65.0	65.1	59.2	67.8

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	71	153	330	712

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Highway 111 DATE: 21-Sep-00
SEGMENT: w/o Jefferson St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 48,500 ADT PK HR VOL 4,850
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
DIST WALL 0 FT MED TRUCK SLE DIST 92.1
DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	68.1	65.8	65.8	59.2	68.1
MEDIUM TRUCKS	61.5	58.7	59.6	54.7	62.6
HEAVY TRUCKS	61.5	58.9	58.7	54.3	62.3
VEHICULAR NOISE	69.7	67.3	67.4	61.4	70.0

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	100	216	465	1002

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Avenue 48 DATE: 21-Sep-00
SEGMENT: w/o Jefferson St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 35,800 ADT PK HR VOL 3,580
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
DIST WALL 0 FT MED TRUCK SLE DIST 96.6
DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	66.5	64.2	64.1	57.5	66.5
MEDIUM TRUCKS	59.9	57.1	58.0	53.1	61.0
HEAVY TRUCKS	59.8	57.3	57.1	52.7	60.7
VEHICULAR NOISE	68.0	65.6	65.7	59.8	68.4

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	78	168	362	780

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 50 DATE: 21-Sep-00
 SEGMENT: w/o Jefferson St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 27,200 ADT PK HR VOL 2,720
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	65.3	63.0	63.0	56.4	65.3
MEDIUM TRUCKS	58.7	55.9	56.8	51.9	59.8
HEAVY TRUCKS	58.6	56.1	55.9	51.5	59.5
VEHICULAR NOISE	66.8	64.4	64.5	58.6	67.2

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	65	140	302	650

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 50 DATE: 21-Sep-00
 SEGMENT: e/o Jefferson St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 22,700 ADT PK HR VOL 2,270
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	64.5	62.2	62.2	55.6	64.5
MEDIUM TRUCKS	57.9	55.1	56.0	51.1	59.0
HEAVY TRUCKS	57.9	55.3	55.1	50.7	58.7
VEHICULAR NOISE	66.1	63.7	63.7	57.8	66.4

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	58	124	267	576

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 52 DATE: 21-Sep-00
 SEGMENT: w/o Jefferson St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 32,900 ADT PK HR VOL 3,290
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	66.1	63.8	63.8	57.2	66.1
MEDIUM TRUCKS	59.5	56.7	57.6	52.7	60.6
HEAVY TRUCKS	59.5	56.9	56.7	52.3	60.3
VEHICULAR NOISE	67.7	65.3	65.4	59.4	68.0

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	74	159	342	737

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 52 DATE: 21-Sep-00
 SEGMENT: e/o Madison St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 25,600 ADT PK HR VOL 2,560
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	65.0	62.7	62.7	56.1	65.0
MEDIUM TRUCKS	58.5	55.6	56.5	51.6	59.6
HEAVY TRUCKS	58.4	55.8	55.6	51.2	59.2
VEHICULAR NOISE	66.6	64.2	64.3	58.3	66.9

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	62	134	290	624

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 52 DATE: 21-Sep-00
 SEGMENT: w/o Van Buren St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 21,800 ADT PK HR VOL 2,180
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	64.3	62.0	62.0	55.4	64.3
MEDIUM TRUCKS	57.8	54.9	55.8	50.9	58.9
HEAVY TRUCKS	57.7	55.1	54.9	50.5	58.5
VEHICULAR NOISE	65.9	63.5	63.6	57.7	66.2

DISTANCES TO CONTOUR LINES:

	70	65	60	55
NOISE LEVEL:				
DISTANCE TO CNEL (FT)	56	121	260	561

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Airport Blvd. DATE: 21-Sep-00
 SEGMENT: e/o Madison St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 19,300 ADT PK HR VOL 1,930
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	63.8	61.5	61.5	54.9	63.8
MEDIUM TRUCKS	57.2	54.4	55.3	50.4	58.3
HEAVY TRUCKS	57.2	54.6	54.4	50.0	58.0
VEHICULAR NOISE	65.4	63.0	63.0	57.1	65.7

DISTANCES TO CONTOUR LINES:

	70	65	60	55
NOISE LEVEL:				
DISTANCE TO CNEL (FT)	52	111	240	517

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Airport Blvd. DATE: 21-Sep-00
 SEGMENT: w/o Van Buren St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 29,200 ADT PK HR VOL 2,920
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	65.6	63.3	63.3	56.7	65.6
MEDIUM TRUCKS	59.0	56.2	57.1	52.2	60.1
HEAVY TRUCKS	59.0	56.4	56.2	51.8	59.8
VEHICULAR NOISE	67.2	64.7	64.8	58.9	67.5

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	68	147	316	681

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Airport Blvd. DATE: 21-Sep-00
 SEGMENT: w/o SR-111 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 33,800 ADT PK HR VOL 3,380
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	66.5	64.2	64.2	57.6	66.6
MEDIUM TRUCKS	60.0	57.1	58.0	53.1	61.1
HEAVY TRUCKS	59.9	57.4	57.1	52.7	60.7
VEHICULAR NOISE	68.1	65.7	65.8	59.9	68.4

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	79	170	365	787

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 60 DATE: 21-Sep-00
 SEGMENT: w/o Filmore St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: RECOMMENDED GENERAL PLAN ALTERNATIVE

ADT 9,800 ADT PK HR VOL 980
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	60.8	58.5	58.5	51.9	60.9
MEDIUM TRUCKS	54.3	51.4	52.4	47.4	55.4
HEAVY TRUCKS	54.2	51.7	51.5	47.0	55.0
VEHICULAR NOISE	62.4	60.0	60.1	54.2	62.8

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	33	71	153	329

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Washington St. DATE: 21-Sep-00
 SEGMENT: n/o 42nd Ave. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 52,200 ADT PK HR VOL 5,220
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	68.4	66.1	66.1	59.5	68.4
MEDIUM TRUCKS	61.9	59.0	59.9	55.0	63.0
HEAVY TRUCKS	61.8	59.3	59.0	54.6	62.6
VEHICULAR NOISE	70.0	67.6	67.7	61.8	70.3

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	105	227	488	1052

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Washington St. DATE: 21-Sep-00
 SEGMENT: s/o Avenue 44 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 65,500 ADT PK HR VOL 6,550
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:
 LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)
 AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:
 PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	69.4	67.1	67.1	60.5	69.4
MEDIUM TRUCKS	62.8	60.0	60.9	56.0	63.9
HEAVY TRUCKS	62.8	60.2	60.0	55.6	63.6
VEHICULAR NOISE	71.0	68.6	68.7	62.7	71.3

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	122	264	568	1224

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Washington St. DATE: 21-Sep-00
 SEGMENT: s/o Highway 111 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 63,300 ADT PK HR VOL 6,330
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 144 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 69.6
 DIST WALL 0 FT MED TRUCK SLE DIST 69.5
 DIST W/OB 100 FT HVY TRUCK SLE DIST 69.5
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:
 LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)
 AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:
 PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	71.1	68.8	68.8	62.2	71.1
MEDIUM TRUCKS	64.5	61.7	62.6	57.7	65.6
HEAVY TRUCKS	64.5	61.9	61.7	57.3	65.3
VEHICULAR NOISE	72.7	70.3	70.3	64.4	73.0

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	159	342	736	1586

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Washington St. DATE: 21-Sep-00
 SEGMENT: n/o Avenue 50 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 53,000 ADT PK HR VOL 5,300
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	68.5	66.2	66.2	59.6	68.5
MEDIUM TRUCKS	61.9	59.1	60.0	55.1	63.0
HEAVY TRUCKS	61.9	59.3	59.1	54.7	62.7
VEHICULAR NOISE	70.1	67.6	67.7	61.8	70.4

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	106	229	493	1063

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Washington St. DATE: 21-Sep-00
 SEGMENT: n/o Avenue 52 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 36,500 ADT PK HR VOL 3,650
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	66.9	64.6	64.5	57.9	66.9
MEDIUM TRUCKS	60.3	57.4	58.4	53.5	61.4
HEAVY TRUCKS	60.2	57.7	57.5	53.1	61.0
VEHICULAR NOISE	68.4	66.0	66.1	60.2	68.8

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	83	179	385	829

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Jefferson St. DATE: 21-Sep-00
 SEGMENT: n/o Highway 111 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 31,200 ADT PK HR VOL 3,120
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	66.2	63.9	63.9	57.3	66.2
MEDIUM TRUCKS	59.6	56.8	57.7	52.8	60.7
HEAVY TRUCKS	59.6	57.0	56.8	52.4	60.4
VEHICULAR NOISE	67.8	65.3	65.4	59.5	68.1

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	75	161	346	746

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Jefferson St. DATE: 21-Sep-00
 SEGMENT: s/o Avenue 48 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 41,200 ADT PK HR VOL 4,120
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	67.4	65.1	65.1	58.5	67.4
MEDIUM TRUCKS	60.8	58.0	58.9	54.0	61.9
HEAVY TRUCKS	60.8	58.2	58.0	53.6	61.6
VEHICULAR NOISE	69.0	66.6	66.6	60.7	69.3

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	90	194	417	898

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Madison St. DATE: 21-Sep-00
 SEGMENT: n/o Avenue 52 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 21,000 ADT PK HR VOL 2,100
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	64.1	61.9	61.8	55.2	64.2
MEDIUM TRUCKS	57.6	54.7	55.7	50.8	58.7
HEAVY TRUCKS	57.5	55.0	54.8	50.3	58.3
VEHICULAR NOISE	65.7	63.3	63.4	57.5	66.1

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	55	118	254	547

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Madison St. DATE: 21-Sep-00
 SEGMENT: s/o Avenue 54 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 35,700 ADT PK HR VOL 3,570
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	66.8	64.5	64.4	57.8	66.8
MEDIUM TRUCKS	60.2	57.3	58.3	53.4	61.3
HEAVY TRUCKS	60.1	57.6	57.4	53.0	61.0
VEHICULAR NOISE	68.3	65.9	66.0	60.1	68.7

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	82	176	379	817

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Harrison St. DATE: 21-Sep-00
 SEGMENT: s/o Airport Blvd. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 46,000 ADT PK HR VOL 4,600
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:
 LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)
 AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:
 PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	67.9	65.6	65.5	58.9	67.9
MEDIUM TRUCKS	61.3	58.4	59.4	54.5	62.4
HEAVY TRUCKS	61.2	58.7	58.5	54.1	62.1
VEHICULAR NOISE	69.4	67.0	67.1	61.2	69.8

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	97	208	449	967

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Harrison St. DATE: 21-Sep-00
 SEGMENT: s/o Avenue 60 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 33,800 ADT PK HR VOL 3,380
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:
 LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)
 AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:
 PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	66.5	64.2	64.2	57.6	66.6
MEDIUM TRUCKS	60.0	57.1	58.0	53.1	61.1
HEAVY TRUCKS	59.9	57.4	57.1	52.7	60.7
VEHICULAR NOISE	68.1	65.7	65.8	59.9	68.4

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	79	170	365	787

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: SR-111 DATE: 21-Sep-00
 SEGMENT: s/o Avenue 60 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 21,100 ADT PK HR VOL 2,110
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	64.2	61.9	61.8	55.3	64.2
MEDIUM TRUCKS	57.6	54.8	55.7	50.8	58.7
HEAVY TRUCKS	57.5	55.0	54.8	50.4	58.4
VEHICULAR NOISE	65.7	63.3	63.4	57.5	66.1

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	55	118	255	548

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 44 DATE: 21-Sep-00
 SEGMENT: w/o Jefferson St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 30,200 ADT PK HR VOL 3,020
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	65.7	63.4	63.4	56.8	65.8
MEDIUM TRUCKS	59.2	56.3	57.3	52.3	60.3
HEAVY TRUCKS	59.1	56.6	56.3	51.9	59.9
VEHICULAR NOISE	67.3	64.9	65.0	59.1	67.6

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	70	150	323	697

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Highway 111 DATE: 21-Sep-00
SEGMENT: w/o Jefferson St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 48,000 ADT PK HR VOL 4,800
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
DIST WALL 0 FT MED TRUCK SLE DIST 92.1
DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	68.0	65.8	65.7	59.1	68.1
MEDIUM TRUCKS	61.5	58.6	59.6	54.7	62.6
HEAVY TRUCKS	61.4	58.9	58.7	54.2	62.2
VEHICULAR NOISE	69.6	67.2	67.3	61.4	70.0

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	99	214	462	995

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Avenue 48 DATE: 21-Sep-00
SEGMENT: w/o Jefferson St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 35,100 ADT PK HR VOL 3,510
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
DIST WALL 0 FT MED TRUCK SLE DIST 96.6
DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	66.4	64.1	64.1	57.5	66.4
MEDIUM TRUCKS	59.8	57.0	57.9	53.0	60.9
HEAVY TRUCKS	59.8	57.2	57.0	52.6	60.6
VEHICULAR NOISE	68.0	65.5	65.6	59.7	68.3

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	77	166	357	770

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Avenue 50 DATE: 21-Sep-00
SEGMENT: w/o Jefferson St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 25,700 ADT PK HR VOL 2,570
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
DIST WALL 0 FT MED TRUCK SLE DIST 96.6
DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	65.0	62.7	62.7	56.1	65.1
MEDIUM TRUCKS	58.5	55.6	56.6	51.6	59.6
HEAVY TRUCKS	58.4	55.9	55.6	51.2	59.2

VEHICULAR NOISE	66.6	64.2	64.3	58.4	66.9
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DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	63	135	290	626

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Avenue 50 DATE: 21-Sep-00
SEGMENT: e/o Jefferson St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 17,600 ADT PK HR VOL 1,760
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
DIST WALL 0 FT MED TRUCK SLE DIST 96.6
DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	63.4	61.1	61.1	54.5	63.4
MEDIUM TRUCKS	56.8	54.0	54.9	50.0	57.9
HEAVY TRUCKS	56.8	54.2	54.0	49.6	57.6

VEHICULAR NOISE	65.0	62.5	62.6	56.7	65.3
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DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	49	105	226	486

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 52 DATE: 21-Sep-00
 SEGMENT: w/o Jefferson St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 26,700 ADT PK HR VOL 2,670
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	65.2	62.9	62.9	56.3	65.2
MEDIUM TRUCKS	58.6	55.8	56.7	51.8	59.7
HEAVY TRUCKS	58.6	56.0	55.8	51.4	59.4

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
VEHICULAR NOISE	66.8	64.4	64.5	58.5	67.1

DISTANCES TO CONTOUR LINES:

	70	65	60	55
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	70	65	60	55
DISTANCE TO CNEL (FT)	64	138	298	642

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 52 DATE: 21-Sep-00
 SEGMENT: e/o Madison St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 17,000 ADT PK HR VOL 1,700
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	63.2	60.9	60.9	54.3	63.3
MEDIUM TRUCKS	56.7	53.8	54.8	49.8	57.8
HEAVY TRUCKS	56.6	54.1	53.8	49.4	57.4

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
VEHICULAR NOISE	64.8	62.4	62.5	56.6	65.1

DISTANCES TO CONTOUR LINES:

	70	65	60	55
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	70	65	60	55
DISTANCE TO CNEL (FT)	47	102	220	475

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Avenue 52 DATE: 21-Sep-00
SEGMENT: w/o Van Buren St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 15,900 ADT PK HR VOL 1,590
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
DIST WALL 0 FT MED TRUCK SLE DIST 96.6
DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	62.9	60.6	60.6	54.0	63.0
MEDIUM TRUCKS	56.4	53.5	54.5	49.5	57.5
HEAVY TRUCKS	56.3	53.8	53.6	49.1	57.1
VEHICULAR NOISE	64.5	62.1	62.2	56.3	64.9

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	45	98	211	454

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Airport Blvd. DATE: 21-Sep-00
SEGMENT: e/o Madison St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 13,100 ADT PK HR VOL 1,310
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
DIST WALL 0 FT MED TRUCK SLE DIST 96.6
DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	62.1	59.8	59.8	53.2	62.1
MEDIUM TRUCKS	55.5	52.7	53.6	48.7	56.6
HEAVY TRUCKS	55.5	52.9	52.7	48.3	56.3
VEHICULAR NOISE	63.7	61.3	61.4	55.4	64.0

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	40	86	185	399

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Airport Blvd. DATE: 21-Sep-00
SEGMENT: w/o Van Buren St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 21,500 ADT PK HR VOL 2,150
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
DIST WALL 0 FT MED TRUCK SLE DIST 96.6
DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	64.2	62.0	61.9	55.3	64.3
MEDIUM TRUCKS	57.7	54.8	55.8	50.9	58.8
HEAVY TRUCKS	57.6	55.1	54.9	50.4	58.4
VEHICULAR NOISE	65.8	63.4	63.5	57.6	66.2

NOISE LEVEL:

	70	65	60	55
DISTANCE TO CNEL (FT)	56	120	258	555

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Airport Blvd. DATE: 21-Sep-00
SEGMENT: w/o SR-111 BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 22,400 ADT PK HR VOL 2,240
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
DIST WALL 0 FT MED TRUCK SLE DIST 92.1
DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	64.7	62.4	62.4	55.8	64.8
MEDIUM TRUCKS	58.2	55.3	56.3	51.3	59.3
HEAVY TRUCKS	58.1	55.6	55.4	50.9	58.9
VEHICULAR NOISE	66.3	63.9	64.0	58.1	66.7

NOISE LEVEL:

	70	65	60	55
DISTANCE TO CNEL (FT)	60	129	278	598

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Avenue 60 DATE: 21-Sep-00
SEGMENT: w/o Filmore St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: EXISTING GENERAL PLAN ALTERNATIVE

ADT 7,000 ADT PK HR VOL 700
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
DIST WALL 0 FT MED TRUCK SLE DIST 96.6
DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	59.4	57.1	57.1	50.5	59.4
MEDIUM TRUCKS	52.8	50.0	50.9	46.0	53.9
HEAVY TRUCKS	52.8	50.2	50.0	45.6	53.6
VEHICULAR NOISE	61.0	58.5	58.6	52.7	61.3

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	26	57	122	263

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Washington St. DATE: 21-Sep-00
SEGMENT: n/o 42nd Ave. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 53,600 ADT PK HR VOL 5,360
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
DIST WALL 0 FT MED TRUCK SLE DIST 92.1
DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	68.5	66.2	66.2	59.6	68.6
MEDIUM TRUCKS	62.0	59.1	60.1	55.1	63.1
HEAVY TRUCKS	61.9	59.4	59.1	54.7	62.7
VEHICULAR NOISE	70.1	67.7	67.8	61.9	70.4

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	107	231	497	1071

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Washington St. DATE: 21-Sep-00
 SEGMENT: s/o Avenue 44 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 68,900 ADT PK HR VOL 6,890
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	69.6	67.3	67.3	60.7	69.7
MEDIUM TRUCKS	63.1	60.2	61.1	56.2	64.2
HEAVY TRUCKS	63.0	60.5	60.2	55.8	63.8
VEHICULAR NOISE	71.2	68.8	68.9	63.0	71.5

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	127	273	588	1266

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Washington St. DATE: 21-Sep-00
 SEGMENT: s/o Highway 111 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 67,800 ADT PK HR VOL 6,780
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 144 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 69.6
 DIST WALL 0 FT MED TRUCK SLE DIST 69.5
 DIST W/OB 100 FT HVY TRUCK SLE DIST 69.5
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	71.4	69.1	69.1	62.5	71.4
MEDIUM TRUCKS	64.8	62.0	62.9	58.0	65.9
HEAVY TRUCKS	64.8	62.2	62.0	57.6	65.6
VEHICULAR NOISE	73.0	70.6	70.6	64.7	73.3

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	166	358	771	1660

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Washington St. DATE: 21-Sep-00
 SEGMENT: n/o Avenue 50 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 54,300 ADT PK HR VOL 5,430
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	68.6	66.3	66.3	59.7	68.6
MEDIUM TRUCKS	62.0	59.2	60.1	55.2	63.1
HEAVY TRUCKS	62.0	59.4	59.2	54.8	62.8
VEHICULAR NOISE	70.2	67.8	67.8	61.9	70.5

NOISE LEVEL:

	70	65	60	55
DISTANCE TO CNEL (FT)	108	233	501	1080

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Washington St. DATE: 21-Sep-00
 SEGMENT: n/o Avenue 52 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 39,600 ADT PK HR VOL 3,960
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	67.2	64.9	64.9	58.3	67.2
MEDIUM TRUCKS	60.7	57.8	58.7	53.8	61.8
HEAVY TRUCKS	60.6	58.1	57.8	53.4	61.4
VEHICULAR NOISE	68.8	66.4	66.5	60.6	69.1

NOISE LEVEL:

	70	65	60	55
DISTANCE TO CNEL (FT)	87	189	406	875

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Jefferson St. DATE: 21-Sep-00
SEGMENT: n/o Highway 111 BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 34,500 ADT PK HR VOL 3,450
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
DIST WALL 0 FT MED TRUCK SLE DIST 92.1
DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	66.6	64.3	64.3	57.7	66.6
MEDIUM TRUCKS	60.1	57.2	58.1	53.2	61.2
HEAVY TRUCKS	60.0	57.5	57.2	52.8	60.8
VEHICULAR NOISE	68.2	65.8	65.9	60.0	68.5

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	80	172	370	798

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Jefferson St. DATE: 21-Sep-00
SEGMENT: s/o Avenue 48 BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 48,600 ADT PK HR VOL 4,860
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
DIST WALL 0 FT MED TRUCK SLE DIST 92.1
DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	68.1	65.8	65.8	59.2	68.1
MEDIUM TRUCKS	61.5	58.7	59.6	54.7	62.7
HEAVY TRUCKS	61.5	58.9	58.7	54.3	62.3
VEHICULAR NOISE	69.7	67.3	67.4	61.4	70.0

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	100	216	466	1003

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Madison St. DATE: 21-Sep-00
SEGMENT: n/o Avenue 52 BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 27,500 ADT PK HR VOL 2,750
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
DIST WALL 0 FT MED TRUCK SLE DIST 96.6
DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	65.3	63.0	63.0	56.4	65.4
MEDIUM TRUCKS	58.8	55.9	56.8	51.9	59.9
HEAVY TRUCKS	58.7	56.2	55.9	51.5	59.5
VEHICULAR NOISE	66.9	64.5	64.6	58.7	67.2

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	65	141	304	654

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Madison St. DATE: 21-Sep-00
SEGMENT: s/o Avenue 54 BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 45,200 ADT PK HR VOL 4,520
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
DIST WALL 0 FT MED TRUCK SLE DIST 92.1
DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	67.8	65.5	65.5	58.9	67.8
MEDIUM TRUCKS	61.2	58.4	59.3	54.4	62.3
HEAVY TRUCKS	61.2	58.6	58.4	54.0	62.0
VEHICULAR NOISE	69.4	67.0	67.0	61.1	69.7

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	96	206	444	956

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Harrison St. DATE: 21-Sep-00
 SEGMENT: s/o Airport Blvd. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 56,900 ADT PK HR VOL 5,690
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	68.8	66.5	66.5	59.9	68.8
MEDIUM TRUCKS	62.2	59.4	60.3	55.4	63.3
HEAVY TRUCKS	62.2	59.6	59.4	55.0	63.0
VEHICULAR NOISE	70.4	68.0	68.0	62.1	70.7

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	111	240	517	1114

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Harrison St. DATE: 21-Sep-00
 SEGMENT: s/o Avenue 60 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 42,600 ADT PK HR VOL 4,260
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	67.5	65.2	65.2	58.6	67.6
MEDIUM TRUCKS	61.0	58.1	59.1	54.1	62.1
HEAVY TRUCKS	60.9	58.4	58.1	53.7	61.7
VEHICULAR NOISE	69.1	66.7	66.8	60.9	69.4

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	92	198	426	919

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: SR-111 DATE: 21-Sep-00
SEGMENT: s/o Avenue 60 BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 23,800 ADT PK HR VOL 2,380
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
DIST WALL 0 FT MED TRUCK SLE DIST 96.6
DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
GRADE: 0 % HEAVY TRUCKS = 8.01 FT
GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	64.7	62.4	62.4	55.8	64.7
MEDIUM TRUCKS	58.1	55.3	56.2	51.3	59.2
HEAVY TRUCKS	58.1	55.5	55.3	50.9	58.9
VEHICULAR NOISE	66.3	63.9	64.0	58.0	66.6

NOISE LEVEL:

	70	65	60	55
DISTANCE TO CNEL (FT)	59	128	276	594

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Avenue 44 DATE: 21-Sep-00
SEGMENT: w/o Jefferson St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 33,000 ADT PK HR VOL 3,300
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
DIST WALL 0 FT MED TRUCK SLE DIST 96.6
DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
GRADE: 0 % HEAVY TRUCKS = 8.01 FT
GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	66.1	63.8	63.8	57.2	66.1
MEDIUM TRUCKS	59.6	56.7	57.6	52.7	60.7
HEAVY TRUCKS	59.5	56.9	56.7	52.3	60.3
VEHICULAR NOISE	67.7	65.3	65.4	59.5	68.0

NOISE LEVEL:

	70	65	60	55
DISTANCE TO CNEL (FT)	74	159	343	739

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Highway 111 DATE: 21-Sep-00
SEGMENT: w/o Jefferson St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 49,900 ADT PK HR VOL 4,990
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
DIST WALL 0 FT MED TRUCK SLE DIST 92.1
DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	68.2	65.9	65.9	59.3	68.2
MEDIUM TRUCKS	61.7	58.8	59.7	54.8	62.8
HEAVY TRUCKS	61.6	59.1	58.8	54.4	62.4
VEHICULAR NOISE	69.8	67.4	67.5	61.6	70.1

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	102	220	474	1021

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Avenue 48 DATE: 21-Sep-00
SEGMENT: w/o Jefferson St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 36,700 ADT PK HR VOL 3,670
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
DIST WALL 0 FT MED TRUCK SLE DIST 96.6
DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	66.6	64.3	64.3	57.7	66.6
MEDIUM TRUCKS	60.0	57.2	58.1	53.2	61.1
HEAVY TRUCKS	59.9	57.4	57.2	52.8	60.8
VEHICULAR NOISE	68.2	65.7	65.8	59.9	68.5

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	79	171	368	793

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 50 DATE: 21-Sep-00
 SEGMENT: w/o Jefferson St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 28,100 ADT PK HR VOL 2,810
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	65.4	63.1	63.1	56.5	65.4
MEDIUM TRUCKS	58.9	56.0	56.9	52.0	60.0
HEAVY TRUCKS	58.8	56.3	56.0	51.6	59.6
VEHICULAR NOISE	67.0	64.6	64.7	58.8	67.3

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	66	143	308	664

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 50 DATE: 21-Sep-00
 SEGMENT: e/o Jefferson St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 23,500 ADT PK HR VOL 2,350
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS:

(HARD SITE=10, SOFT SITE=15)
 AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	64.6	62.3	62.3	55.7	64.7
MEDIUM TRUCKS	58.1	55.2	56.2	51.2	59.2
HEAVY TRUCKS	58.0	55.5	55.3	50.8	58.8
VEHICULAR NOISE	66.2	63.8	63.9	58.0	66.6

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	59	127	274	589

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 52 DATE: 21-Sep-00
 SEGMENT: w/o Jefferson St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 34,000 ADT PK HR VOL 3,400
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	66.2	63.9	63.9	57.3	66.3
MEDIUM TRUCKS	59.7	56.8	57.8	52.8	60.8
HEAVY TRUCKS	59.6	57.1	56.9	52.4	60.4
VEHICULAR NOISE	67.8	65.4	65.5	59.6	68.2

DISTANCES TO CONTOUR LINES:

	70	65	60	55
NOISE LEVEL:				
DISTANCE TO CNEL (FT)	75	162	350	754

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 52 DATE: 21-Sep-00
 SEGMENT: e/o Madison St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 25,400 ADT PK HR VOL 2,540
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	65.0	62.7	62.7	56.1	65.0
MEDIUM TRUCKS	58.4	55.6	56.5	51.6	59.5
HEAVY TRUCKS	58.4	55.8	55.6	51.2	59.2
VEHICULAR NOISE	66.6	64.1	64.2	58.3	66.9

DISTANCES TO CONTOUR LINES:

	70	65	60	55
NOISE LEVEL:				
DISTANCE TO CNEL (FT)	62	134	288	621

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 52 DATE: 21-Sep-00
 SEGMENT: w/o Van Buren St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 22,200 ADT PK HR VOL 2,220
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	64.4	62.1	62.1	55.5	64.4
MEDIUM TRUCKS	57.8	55.0	55.9	51.0	58.9
HEAVY TRUCKS	57.8	55.2	55.0	50.6	58.6
VEHICULAR NOISE	66.0	63.6	63.6	57.7	66.3

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	57	122	263	567

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Airport Blvd. DATE: 21-Sep-00
 SEGMENT: e/o Madison St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 19,800 ADT PK HR VOL 1,980
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	63.9	61.6	61.6	55.0	63.9
MEDIUM TRUCKS	57.3	54.5	55.4	50.5	58.4
HEAVY TRUCKS	57.3	54.7	54.5	50.1	58.1
VEHICULAR NOISE	65.5	63.1	63.2	57.2	65.8

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	53	113	244	526

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Airport Blvd. DATE: 21-Sep-00
SEGMENT: w/o Van Buren St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 30,500 ADT PK HR VOL 3,050
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
DIST WALL 0 FT MED TRUCK SLE DIST 96.6
DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	65.8	63.5	63.4	56.9	65.8
MEDIUM TRUCKS	59.2	56.4	57.3	52.4	60.3
HEAVY TRUCKS	59.1	56.6	56.4	52.0	60.0
VEHICULAR NOISE	67.3	64.9	65.0	59.1	67.7

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	70	151	325	701

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Airport Blvd. DATE: 21-Sep-00
SEGMENT: w/o SR-111 BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 37,300 ADT PK HR VOL 3,730
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
DIST WALL 0 FT MED TRUCK SLE DIST 92.1
DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	66.9	64.7	64.6	58.0	67.0
MEDIUM TRUCKS	60.4	57.5	58.5	53.6	61.5
HEAVY TRUCKS	60.3	57.8	57.6	53.1	61.1
VEHICULAR NOISE	68.5	66.1	66.2	60.3	68.9

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	84	181	390	841

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Avenue 60 DATE: 21-Sep-00
SEGMENT: w/o Filmore St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: GENERAL PLAN HIGH ALTERNATIVE

ADT 15,400 ADT PK HR VOL 1,540
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
DIST WALL 0 FT MED TRUCK SLE DIST 96.6
DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	62.8	60.5	60.5	53.9	62.8
MEDIUM TRUCKS	56.2	53.4	54.3	49.4	57.4
HEAVY TRUCKS	56.2	53.6	53.4	49.0	57.0

VEHICULAR NOISE	64.4	62.0	62.1	56.1	64.7
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DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
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DISTANCE TO CNEL (FT)	44	96	206	445
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FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Washington St. DATE: 21-Sep-00
SEGMENT: n/o 42nd Ave. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 51,900 ADT PK HR VOL 5,190
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
DIST WALL 0 FT MED TRUCK SLE DIST 92.1
DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	68.4	66.1	66.1	59.5	68.4
MEDIUM TRUCKS	61.8	59.0	59.9	55.0	62.9
HEAVY TRUCKS	61.8	59.2	59.0	54.6	62.6

VEHICULAR NOISE	70.0	67.6	67.6	61.7	70.3
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DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
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DISTANCE TO CNEL (FT)	105	226	486	1048
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FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Washington St. DATE: 21-Sep-00
 SEGMENT: s/o Avenue 44 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 65,000 ADT PK HR VOL 6,500
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	69.4	67.1	67.0	60.4	69.4
MEDIUM TRUCKS	62.8	60.0	60.9	56.0	63.9
HEAVY TRUCKS	62.7	60.2	60.0	55.6	63.6
VEHICULAR NOISE	70.9	68.5	68.6	62.7	71.3

NOISE LEVEL:

	70	65	60	55
DISTANCE TO CNEL (FT)	122	262	565	1218

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Washington St. DATE: 21-Sep-00
 SEGMENT: s/o Highway 111 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 62,700 ADT PK HR VOL 6,270
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 144 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 69.6
 DIST WALL 0 FT MED TRUCK SLE DIST 69.5
 DIST W/OB 100 FT HVY TRUCK SLE DIST 69.5
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	71.0	68.8	68.7	62.1	71.1
MEDIUM TRUCKS	64.5	61.6	62.6	57.7	65.6
HEAVY TRUCKS	64.4	61.9	61.7	57.2	65.2
VEHICULAR NOISE	72.6	70.2	70.3	64.4	73.0

NOISE LEVEL:

	70	65	60	55
DISTANCE TO CNEL (FT)	158	340	731	1576

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Washington St. DATE: 21-Sep-00
 SEGMENT: n/o Avenue 50 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 50,400 ADT PK HR VOL 5,040
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	68.3	66.0	65.9	59.3	68.3
MEDIUM TRUCKS	61.7	58.8	59.8	54.9	62.8
HEAVY TRUCKS	61.6	59.1	58.9	54.5	62.4
VEHICULAR NOISE	69.8	67.4	67.5	61.6	70.2

DISTANCES TO CONTOUR LINES:

	70	65	60	55
NOISE LEVEL:				
DISTANCE TO CNEL (FT)	103	221	477	1028

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Washington St. DATE: 21-Sep-00
 SEGMENT: n/o Avenue 52 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 32,200 ADT PK HR VOL 3,220
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	66.3	64.0	64.0	57.4	66.3
MEDIUM TRUCKS	59.8	56.9	57.8	52.9	60.9
HEAVY TRUCKS	59.7	57.2	56.9	52.5	60.5
VEHICULAR NOISE	67.9	65.5	65.6	59.7	68.2

DISTANCES TO CONTOUR LINES:

	70	65	60	55
NOISE LEVEL:				
DISTANCE TO CNEL (FT)	76	164	354	762

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Jefferson St. DATE: 21-Sep-00
SEGMENT: n/o Highway 111 BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 28,200 ADT PK HR VOL 2,820
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
DIST WALL 0 FT MED TRUCK SLE DIST 92.1
DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	65.7	63.4	63.4	56.8	65.8
MEDIUM TRUCKS	59.2	56.3	57.3	52.3	60.3
HEAVY TRUCKS	59.1	56.6	56.4	51.9	59.9
VEHICULAR NOISE	67.3	64.9	65.0	59.1	67.7

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	70	150	324	698

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Jefferson St. DATE: 21-Sep-00
SEGMENT: s/o Avenue 48 BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 38,000 ADT PK HR VOL 3,800
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
DIST WALL 0 FT MED TRUCK SLE DIST 92.1
DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	67.0	64.7	64.7	58.1	67.1
MEDIUM TRUCKS	60.5	57.6	58.6	53.6	61.6
HEAVY TRUCKS	60.4	57.9	57.6	53.2	61.2
VEHICULAR NOISE	68.6	66.2	66.3	60.4	69.0

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	85	183	395	851

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Madison St. DATE: 21-Sep-00
 SEGMENT: n/o Avenue 52 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 19,900 ADT PK HR VOL 1,990
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	63.9	61.6	61.6	55.0	63.9
MEDIUM TRUCKS	57.4	54.5	55.4	50.5	58.5
HEAVY TRUCKS	57.3	54.8	54.5	50.1	58.1
VEHICULAR NOISE	65.5	63.1	63.2	57.3	65.8

DISTANCES TO CONTOUR LINES:

	70	65	60	55
NOISE LEVEL:				
DISTANCE TO CNEL (FT)	53	114	245	527

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Madison St. DATE: 21-Sep-00
 SEGMENT: s/o Avenue 54 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 35,700 ADT PK HR VOL 3,570
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	66.8	64.5	64.4	57.8	66.8
MEDIUM TRUCKS	60.2	57.3	58.3	53.4	61.3
HEAVY TRUCKS	60.1	57.6	57.4	53.0	61.0
VEHICULAR NOISE	68.3	65.9	66.0	60.1	68.7

DISTANCES TO CONTOUR LINES:

	70	65	60	55
NOISE LEVEL:				
DISTANCE TO CNEL (FT)	82	176	379	817

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Harrison St. DATE: 21-Sep-00
 SEGMENT: s/o Airport Blvd. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 48,300 ADT PK HR VOL 4,830
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	68.1	65.8	65.8	59.2	68.1
MEDIUM TRUCKS	61.5	58.7	59.6	54.7	62.6
HEAVY TRUCKS	61.5	58.9	58.7	54.3	62.3
VEHICULAR NOISE	69.7	67.2	67.3	61.4	70.0

NOISE LEVEL:

DISTANCES TO CONTOUR LINES:

	70	65	60	55
DISTANCE TO CNEL (FT)	100	215	464	999

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Harrison St. DATE: 21-Sep-00
 SEGMENT: s/o Avenue 60 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 33,500 ADT PK HR VOL 3,350
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	66.5	64.2	64.2	57.6	66.5
MEDIUM TRUCKS	59.9	57.1	58.0	53.1	61.0
HEAVY TRUCKS	59.9	57.3	57.1	52.7	60.7
VEHICULAR NOISE	68.1	65.7	65.7	59.8	68.4

NOISE LEVEL:

DISTANCES TO CONTOUR LINES:

	70	65	60	55
DISTANCE TO CNEL (FT)	78	169	363	783

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: SR-111 DATE: 21-Sep-00
 SEGMENT: s/o Avenue 60 BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 21,600 ADT PK HR VOL 2,160
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	64.3	62.0	61.9	55.4	64.3
MEDIUM TRUCKS	57.7	54.9	55.8	50.9	58.8
HEAVY TRUCKS	57.6	55.1	54.9	50.5	58.5
VEHICULAR NOISE	65.8	63.4	63.5	57.6	66.2

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	56	120	259	557

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 44 DATE: 21-Sep-00
 SEGMENT: w/a Jefferson St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 30,600 ADT PK HR VOL 3,060
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 GRADE: 0 % HEAVY TRUCKS = 8.01 FT
 GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	65.8	63.5	63.5	56.9	65.8
MEDIUM TRUCKS	59.2	56.4	57.3	52.4	60.3
HEAVY TRUCKS	59.2	56.6	56.4	52.0	60.0
VEHICULAR NOISE	67.4	65.0	65.0	59.1	67.7

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	70	151	326	703

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Highway 111 DATE: 21-Sep-00
 SEGMENT: w/o Jefferson St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 46,000 ADT PK HR VOL 4,600
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
 DIST WALL 0 FT MED TRUCK SLE DIST 92.1
 DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	67.9	65.6	65.5	58.9	67.9
MEDIUM TRUCKS	61.3	58.4	59.4	54.5	62.4
HEAVY TRUCKS	61.2	58.7	58.5	54.1	62.1
VEHICULAR NOISE	69.4	67.0	67.1	61.2	69.8

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	97	208	449	967

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 48 DATE: 21-Sep-00
 SEGMENT: w/o Jefferson St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 28,200 ADT PK HR VOL 2,820
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	65.4	63.1	63.1	56.5	65.5
MEDIUM TRUCKS	58.9	56.0	57.0	52.0	60.0
HEAVY TRUCKS	58.8	56.3	56.0	51.6	59.6
VEHICULAR NOISE	67.0	64.6	64.7	58.8	67.3

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	67	143	309	665

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 50 DATE: 21-Sep-00
 SEGMENT: w/o Jefferson St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 23,600 ADT PK HR VOL 2,360
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	64.7	62.4	62.3	55.7	64.7
MEDIUM TRUCKS	58.1	55.2	56.2	51.3	59.2
HEAVY TRUCKS	58.0	55.5	55.3	50.8	58.8
VEHICULAR NOISE	66.2	63.8	63.9	58.0	66.6

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	59	127	274	591

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 50 DATE: 21-Sep-00
 SEGMENT: e/o Jefferson St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 17,100 ADT PK HR VOL 1,710
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	63.3	61.0	60.9	54.3	63.3
MEDIUM TRUCKS	56.7	53.8	54.8	49.9	57.8
HEAVY TRUCKS	56.6	54.1	53.9	49.5	57.4
VEHICULAR NOISE	64.8	62.4	62.5	56.6	65.2

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	48	103	221	477

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 52 DATE: 21-Sep-00
 SEGMENT: w/o Jefferson St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 25,600 ADT PK HR VOL 2,560
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:
 LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)
 AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:
 PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	65.0	62.7	62.7	56.1	65.0
MEDIUM TRUCKS	58.5	55.6	56.5	51.6	59.6
HEAVY TRUCKS	58.4	55.8	55.6	51.2	59.2
VEHICULAR NOISE	66.6	64.2	64.3	58.3	66.9

DISTANCES TO CONTOUR LINES:

	70	65	60	55
NOISE LEVEL:				
DISTANCE TO CNEL (FT)	62	134	290	624

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
 ROADWAY: Avenue 52 DATE: 21-Sep-00
 SEGMENT: e/o Madison St. BY: B. LAWSON
 LOCATION: City of La Quinta
 SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 16,500 ADT PK HR VOL 1,650
 SPEED 45 MPH
 PK HR 10 %
 DIST CTL 100 FT
 DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
 DIST WALL 0 FT MED TRUCK SLE DIST 96.6
 DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
 HTH WALL 0 FT
 HTH OBS 5 FT

ROADWAY VIEW:
 LF ANGLE -90 DGR
 RT ANGLE 90 DGR
 DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)
 AUTOMOBILES 15
 MED TRUCKS 15
 HVY TRUCKS 15
 BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:
 PAD 0 FT AUTOMOBILES = 0.00 FT
 ROAD 0 FT MEDIUM TRUCKS = 2.30 FT
 HEAVY TRUCKS = 8.01 FT
 GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	63.1	60.8	60.8	54.2	63.1
MEDIUM TRUCKS	56.5	53.7	54.6	49.7	57.7
HEAVY TRUCKS	56.5	53.9	53.7	49.3	57.3
VEHICULAR NOISE	64.7	62.3	62.4	56.4	65.0

DISTANCES TO CONTOUR LINES:

	70	65	60	55
NOISE LEVEL:				
DISTANCE TO CNEL (FT)	47	100	216	466

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Avenue 52 DATE: 21-Sep-00
SEGMENT: w/o Van Buren St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 16,400 ADT PK HR VOL 1,640
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36)
DIST WALL 0 FT
DIST W/OB 100 FT
HTH WALL 0 FT
HTH OBS 5 FT

AUTO SLE DISTANCE 96.7
MED TRUCK SLE DIST 96.6
HVY TRUCK SLE DIST 96.6

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS:

(HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0

(0=WALL,1=BERM)

ELEVATIONS

PAD 0 FT
ROAD 0 FT

AUTOMOBILES = 0.00 FT
MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT

GRADE: 0 %

GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	63.1	60.8	60.8	54.2	63.1
MEDIUM TRUCKS	56.5	53.7	54.6	49.7	57.6
HEAVY TRUCKS	56.5	53.9	53.7	49.3	57.3
VEHICULAR NOISE	64.7	62.2	62.3	56.4	65.0

NOISE LEVEL:

DISTANCES TO CONTOUR LINES:

	70	65	60	55
DISTANCE TO CNEL (FT)	46	100	215	464

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Airport Blvd. DATE: 21-Sep-00
SEGMENT: e/o Madison St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 15,700 ADT PK HR VOL 1,570
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36)
DIST WALL 0 FT
DIST W/OB 100 FT
HTH WALL 0 FT
HTH OBS 5 FT

AUTO SLE DISTANCE 96.7
MED TRUCK SLE DIST 96.6
HVY TRUCK SLE DIST 96.6

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS:

(HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0

(0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT
ROAD 0 FT

AUTOMOBILES = 0.00 FT
MEDIUM TRUCKS = 2.30 FT
HEAVY TRUCKS = 8.01 FT

GRADE: 0 %

GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	62.9	60.6	60.6	54.0	62.9
MEDIUM TRUCKS	56.3	53.5	54.4	49.5	57.4
HEAVY TRUCKS	56.3	53.7	53.5	49.1	57.1
VEHICULAR NOISE	64.5	62.1	62.1	56.2	64.8

NOISE LEVEL:

DISTANCES TO CONTOUR LINES:

	70	65	60	55
DISTANCE TO CNEL (FT)	45	97	209	450

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Airport Blvd. DATE: 21-Sep-00
SEGMENT: w/o Van Buren St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 24,600 ADT PK HR VOL 2,460
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
DIST WALL 0 FT MED TRUCK SLE DIST 96.6
DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	64.8	62.5	62.5	55.9	64.9
MEDIUM TRUCKS	58.3	55.4	56.4	51.4	59.4
HEAVY TRUCKS	58.2	55.7	55.5	51.0	59.0
VEHICULAR NOISE	66.4	64.0	64.1	58.2	66.8

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	61	131	282	608

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Airport Blvd. DATE: 21-Sep-00
SEGMENT: w/o SR-111 BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 31,200 ADT PK HR VOL 3,120
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 78 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 92.2
DIST WALL 0 FT MED TRUCK SLE DIST 92.1
DIST W/OB 100 FT HVY TRUCK SLE DIST 92.1
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:

LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:

PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	66.2	63.9	63.9	57.3	66.2
MEDIUM TRUCKS	59.6	56.8	57.7	52.8	60.7
HEAVY TRUCKS	59.6	57.0	56.8	52.4	60.4
VEHICULAR NOISE	67.8	65.3	65.4	59.5	68.1

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	75	161	346	746

FWHA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Avenue 60 DATE: 21-Sep-00
SEGMENT: w/o Filmore St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 8,900 ADT PK HR VOL 890
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
DIST WALL 0 FT MED TRUCK SLE DIST 96.6
DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:
LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)
AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:
PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	60.4	58.1	58.1	51.5	60.5
MEDIUM TRUCKS	53.9	51.0	51.9	47.0	55.0
HEAVY TRUCKS	53.8	51.3	51.0	46.6	54.6
VEHICULAR NOISE	62.0	59.6	59.7	53.8	62.3

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	31	66	143	308

APPENDIX D

RAILROAD NOISE ANALYSIS CALCULATIONS

**UNION PACIFIC RAILROAD 100' FROM TRACKS
CNEL WORKSHEET FOR LINE OPERATIONS**

Train Category Identification	L, feet (train length)	V, mph (train speed)	% grade	Barrier (if existing)	Distance to track, feet	(1) Pass-by Duration, sec (L/V)	(2) C ₁ (10log ₁₀ L)	(3) Car SPL at 100' dB C ₁	(4) Car distance attenuation a	(5) Car barrier correction	(6) Car Noise Adjustment C ₂	(7) SENEL (cars), dB C ₁ +C ₂ +C ₃ +a _{bar}	(8) Loco SENEL at 100' C ₁ , dB	(9) Loco distance attenuation a	(10) Loco barrier correction	(11) Helper engine adjustment C ₃	(12) SENEL (loco), dB C ₁ +C ₂ +a _{bar}	(13) SENEL (Train) dB	(14) N equiv. no. of daily operations	(15) CNEL contribution	COMPOSITE CNEL AT DISTANCE INDICATED			
																					(16) 100'	(17) 200'	(18) 400'	(19) 800'
1 FREIGHT	5200	70	0.0%	0	100'	50.5	17.4	84	0	0	0	101.0	100	4.0	0	0	100.0	103.6	185	75.1	75.1			
					200'				4	0	0	97.0		7.5	0		96.5	99.8		71.4		71.5		
					400'				10	0	0	91.0		7.5	0		92.5	94.8		66.9			67.0	
					800'				16.5	0	0	84.5		12.0	0		86.0	89.6		62.1				62.1
2 AMTRAK	1200	60	0.0%	0	100'	13.6	11.1	64	0	0	0	101.0	98	4.0	0	0	100.0	103.6	2	55.4				
					200'				4	0	0	97.0		7.5	0		96.5	99.8		51.8				
					400'				10	0	0	91.0		7.5	0		92.5	94.8		47.3				
					800'				16.5	0	0	84.5		12.0	0		86.0	89.6		42.4				
3					100'			64	0	0	0	101.0	96	0.0	0	0	100.0	103.6						
					200'				4	0	0	97.0		7.5	0		96.5	99.8						
					400'				10	0	0	91.0		7.5	0		92.5	94.8						
					800'				16.5	0	0	84.5		12.0	0		86.0	89.6						
4					100'																			
					200'																			
					400'																			
					800'																			

5500 = User Inputs
Cal = Calculated Values
R = From Charts

WYLE LABS WCR73.5 Assessment of Noise Environments Around Railroad Operations			
Scenario:	UNION PACIFIC RAILROAD 100' FROM TRACKS		
Input Data:	Results:		
Wall Distance From Track (25, 50, 100, or 150 feet)	100	75.1 CNEL at 100'	
		71.5 CNEL at 200'	
		67.0 CNEL at 400'	
Wall Height (in feet)	0	62.1 CNEL at 800'	
Observer Distance From Track	100	75.1 CNEL at 100'	

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL)

PROJECT: GENERAL PLAN NOISE ELEMENT UPDATE JN: 0341-98-05
ROADWAY: Avenue 60 DATE: 21-Sep-00
SEGMENT: w/o Fillmore St. BY: B. LAWSON
LOCATION: City of La Quinta
SCENARIO: GENERAL PLAN LOW ALTERNATIVE

ADT 8,900 ADT PK HR VOL 890
SPEED 45 MPH
PK HR 10 %
DIST CTL 100 FT
DIST N/F 52 FT (M=76,P=52,S=36) AUTO SLE DISTANCE 96.7
DIST WALL 0 FT MED TRUCK SLE DIST 96.6
DIST W/OB 100 FT HVY TRUCK SLE DIST 96.6
HTH WALL 0 FT
HTH OBS 5 FT

ROADWAY VIEW:
LF ANGLE -90 DGR
RT ANGLE 90 DGR
DF ANGLE 180 DGR

SITE CONDITIONS: (HARD SITE=10, SOFT SITE=15)
AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
BARRIER 0 (0=WALL,1=BERM)

ELEVATIONS:
PAD 0 FT AUTOMOBILES = 0.00 FT
ROAD 0 FT MEDIUM TRUCKS= 2.30 FT
HEAVY TRUCKS = 8.01 FT
GRADE: 0 % GRADE ADJUSTM 0.0 DB TO HEAVY TRUCKS

VEHICLE DISTRIBUTION:

	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.7085	0.1759	0.1156	0.9772
MEDIUM TRUCKS	0.6210	0.1927	0.1863	0.0172
HEAVY TRUCKS	0.6689	0.1589	0.1722	0.0056

UNATTENUATED NOISE LEVELS:

	LEQ PK HR	LEQ DAY	LEQ EVE	LEQ NIGHT	CNEL
AUTOMOBILES	60.4	58.1	58.1	51.5	60.5
MEDIUM TRUCKS	53.9	51.0	51.9	47.0	55.0
HEAVY TRUCKS	53.8	51.3	51.0	46.6	54.6
VEHICULAR NOISE	62.0	59.6	59.7	53.8	62.3

DISTANCES TO CONTOUR LINES:

NOISE LEVEL:	70	65	60	55
DISTANCE TO CNEL (FT)	31	66	143	308

APPENDIX D

RAILROAD NOISE ANALYSIS CALCULATIONS

**UNION PACIFIC RAILROAD 100' FROM TRACKS
CNEL WORKSHEET FOR LINE OPERATIONS**

Train Category (Identification)	L, feet (train length)	V, mph (train speed)	% grade	Barrier (# existing)	Distance to track feet	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	COMPOSITE CNEL AT DISTANCE INDICATED				
						Pass-by Duration, sec 1=LV	C ₁ [10log ₁₀ (1)]	Car SPL at 100' dB C ₁	Car distance attenuation a	a _w Car barrier correction	Car Noise Adjustment C ₂	SENEL (cars) dB C ₁ +C ₂ + C ₃ -a _w	Loco. SENEL at 100' C ₄ , dB	Loco distance attenuation a	a _w Loco. Barrier correction	Helper engine adjustment C ₅	SENEL (loco.), dB C ₄ +C ₅ - a _w	SENEL (Train) dB	N equiv. no. of daily operations	CNEL contribution	(16) 100'	(17) 200'	(18) 400'	(19) 800'	(20)
1 FREIGHT	5200	70	0.0%	0	100'	50.5	17.5	84	0	0	0	101.0	100	9.0	0	0	100.0	103.6	185	75.1	75.1	5			
					200'				4	0	0	97.0		3.5	0		96.5	99.8		71.4					
					400'				10	0	0	91.0		7.5	0		92.5	94.8		66.0		67.0			
					800'				15.5	0	0	84.5		12.0	0		88.0	89.6		61.1			62.1		
2 AMTRAK	1200	60	0.0%	0	100'	13.6	11.1	84	0	0	0	101.0	08	6.0	0	0	100.0	103.6	2	55.4					
					200'				4	0	0	97.0		3.5	0		96.5	99.8		51.8					
					400'				10	0	0	91.0		7.5	0		92.5	94.8		47.3					
					800'				10.5	0	0	84.5		12.0	0		88.0	89.6		42.4					
3					100'			82	0	0	0	101.0	05	0.0	0	0	100.0	103.6							
					200'				4	0	0	97.0		3.5	0		96.5	99.8							
					400'				10	0	0	91.0		7.5	0		92.5	94.8							
					800'				16.5	0	0	84.5		12.0	0		88.0	89.6							
4					100'																				
					200'																				
					400'																				
					800'																				

5500 = User Inputs
 (1)-(15) = Calculated Values
 RA = From Charts

WYLE LABS WCR73.5 Assessment of Noise Environments Around Railroad Operations	
Scenario:	UNION PACIFIC RAILROAD 100' FROM TRACKS
Input Data:	Results:
Wall Distance From Track (25, 50, 100, or 150 feet)	100 75.1 CNEL at 100'
	71.5 CNEL at 200'
	67.0 CNEL at 400'
Wall Height (in feet)	0 62.1 CNEL at 800'
Observer Distance From Track	100 75.1 CNEL at 100'

APPENDIX F

City of La Quinta General Plan Update Traffic Study La Quinta, California

Prepared by

RKJK & Associates, Inc.
1601 Dove Street, Suite 290
Newport Beach, CA 92660
September 28, 2000

CITY OF LA QUINTA GENERAL PLAN UPDATE TRAFFIC STUDY (REVISED) La Quinta, California September 28, 2000

LA QUINTA GENERAL PLAN UPDATE
TRAFFIC STUDY (REVISED)

Prepared for:

Ms. Nicole Criste, AICP
TERRA NOVA PLANNING & RESEARCH
400 S. Farrell, Suite B-205
Palm Springs, CA 92262

Prepared by:

RKJK & ASSOCIATES, INC.
1601 Dove Street, Suite 290
Newport Beach, CA 92660

John Kain, AICP
Scott Sato, P.E.

September 28, 2000

JN:0341-98-06
JK:SS:skf/10883

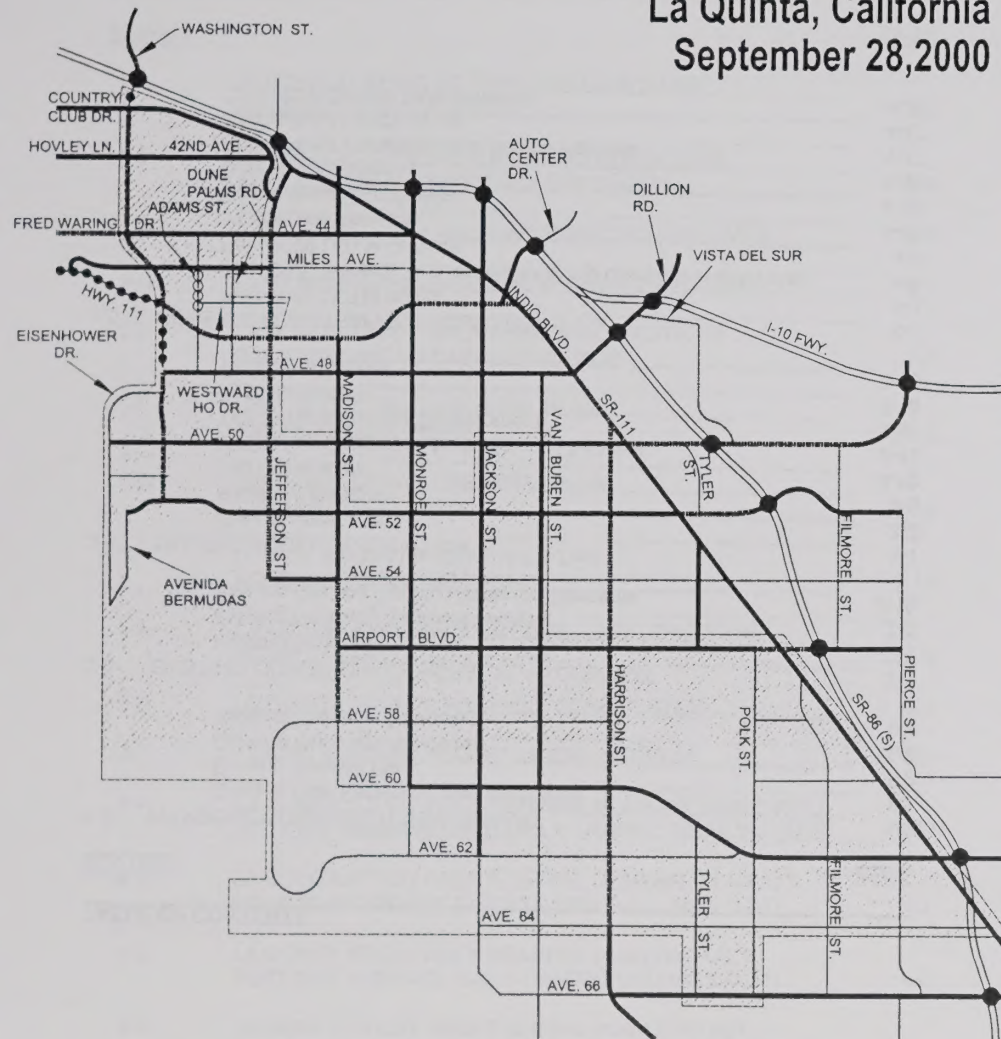


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LA QUINTA GENERAL PLAN UPDATE TRAFFIC STUDY (REVISED)

1.0 INTRODUCTION/EXECUTIVE SUMMARY

This report presents the technical analysis of the circulation system requirements for the City of La Quinta General Plan Update. This report provides a summary of the existing General Plan context as well as an evaluation of future general plan buildout traffic projections based upon the La Quinta Traffic Model (LQTM).

The Coachella Valley Area Transportation Study (CVATS) model was developed by the Southern California Association of Governments (SCAG) to analyze regional transportation needs for the Coachella Valley. This TRANPLAN-based model is currently used by most of the agencies in the Valley to develop their long-range transportation plans. TRANPLAN (TRANsplantation PLANning) is a modeling software package that is used throughout Riverside County and in developing the (LQTM).

The traffic analysis zone structure (boundaries used to aggregate land uses) and the circulation system used in the CVATS model does not include sufficient detail to provide refined forecasts required by the City of La Quinta. To address these deficiencies, the LQTM was developed as a pure focussed version of the Coachella Valley Area Transportation Study (CVATS) model, with enhanced zone and network details within City boundaries. Four scenarios have been evaluated using the LQTM, as follows:

- General Plan Recommended Alternative
- Existing General Plan
- General Plan High Alternative
- General Plan Low Alternative

Existing conditions, in terms of traffic volumes and roadway characteristics, have been compiled and presented in Section 2.0 of this study. Based on the available traffic data, no existing deficiencies have been identified at the study area intersections. The last section of this report presents RKJK recommendations regarding long range future intersection and roadway improvement needs at key locations throughout the study area.

Based on these analyses, roadway segments exceeding the allowable level of service have been identified. Table 4-2 (on Page 4-17) provides a summary of the study area intersections identified as operating at an unacceptable level of service for the respective General Plan Scenario:

General Plan Recommended Alternative

None

Existing General Plan

None

General Plan High Alternative

Washington St. (NS) at:

- Hovley Ln. (EW)

Jefferson St. (NS) at:

- Country Club Dr. (EW)

SR-111 (NS) at:

- Airport Blvd. (EW)

General Plan Low Alternative

None

Specific roadway classification and number of lanes have been recommended for all arterial roadways in the City. These recommendations are intended to address future deficiencies per the City's criteria.

A new 8-lane roadway classification, labeled "Augmented Major", is recommended at the following locations:

- Washington Street, Country Club Drive to the I-10 Freeway
- Washington Street, Highway 111 to Avenue 48
- Highway 111, west of Washington Street

The City should continue to review and monitor land use trends and their associated changes in traffic volumes and patterns, and make periodic adjustments in planning and program implementation by utilizing roadway improvement and maintenance management programs. This will be accomplished by regularly monitoring traffic on major roadways and by conducting ongoing inventories of current traffic and circulation patterns. The City should continue to coordinate with State and regional agencies that have jurisdiction over the state highways in the community. Through the phased implementation the roadway cross-sections and the identified intersection geometries presented in this study, the City can progressively alleviate current problems and avoid future system inadequacies.

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2.0 EXISTING CONDITIONS/GENERAL PLAN CONTEXT

The City of La Quinta is located in the eastern portion of the Coachella Valley and is served regionally by Interstate 10, State Route 111 and State Route 86.

Existing Conditions

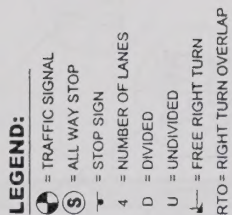
Current traffic conditions in the study area have been reviewed to determine the number of lanes at both intersection and roadway segments. Traffic control devices have also been identified at all intersections where current traffic counts are available. Exhibit 2-A illustrates the existing geometries and traffic controls throughout the City. Existing daily and peak hour traffic volumes have been compiled from current traffic studies prepared for proposed developments. Exhibits 2-B through 2-D illustrate the daily, AM peak hour, and PM peak hour traffic volumes in the study area, respectively.

Appendix "A" contains the published traffic counts from various traffic studies prepared for proposed developments throughout the City.

Existing Roadway Segment Analysis

An analysis of daily conditions has been prepared to determine the current roadway segment deficiencies. The daily traffic volumes illustrated on Exhibit 2-B have been divided by the roadway capacity to develop volume-to-capacity (V/C) ratios. Table 2-1 summarizes the roadway capacities for the various roadway types identified in the Current General Plan. Exhibit 2-E shows the V/C ratios for all roadways where existing daily traffic volumes were available. Based on this exhibit, study area roadway segments are operating within capacity ($v/c < 1.0$) on a daily basis.

EXHIBIT 2-A



0341-98-06 21A REV: 09/25/00
LA QUINTA TRAFFIC MODEL, La Quinta, California



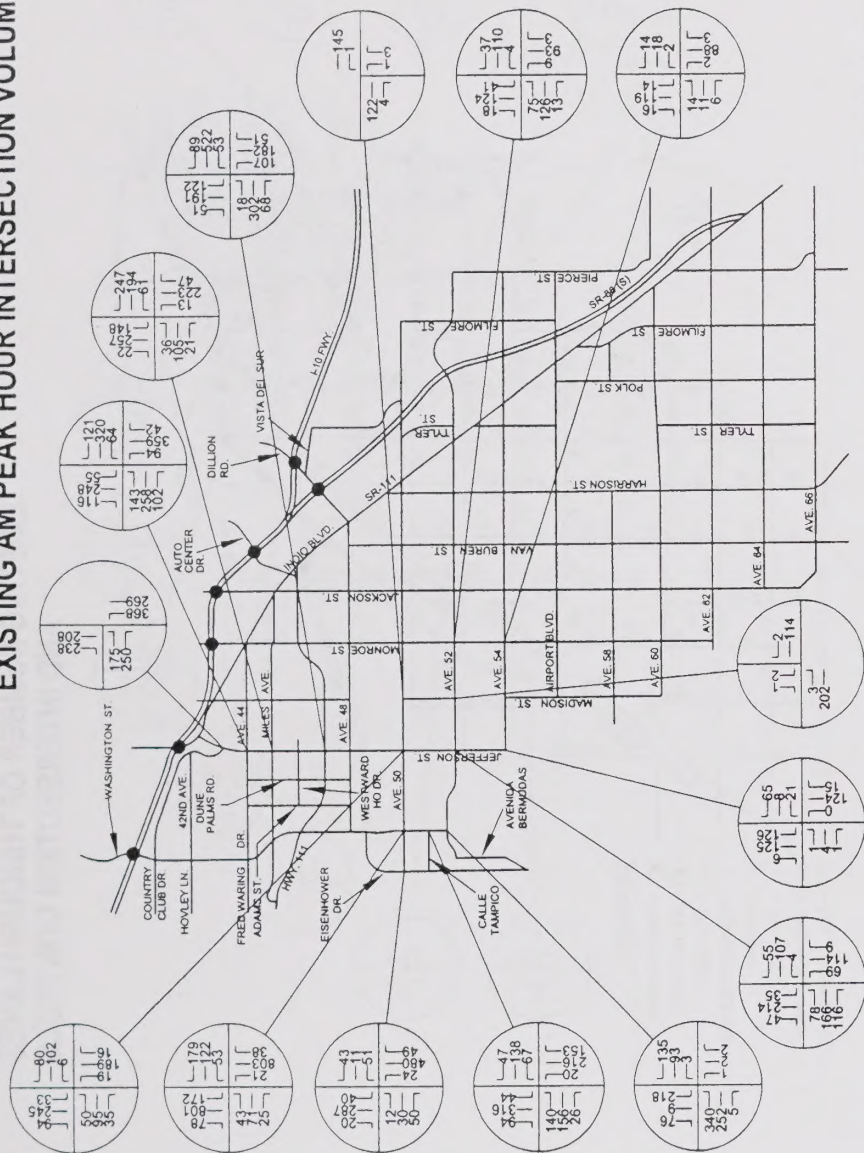
- (1) = COUNTRY CLUB OF THE DESERT (RKJK, 2000)
(2) = THE RANCH (RKJK, 2000)
(3) = WALGREENS (RKJK, 2000)
(4) = TENTATIVE TRACT MAP NO. 29323 (RKJK, 1999)
(5) = CVAG 1990 TRAFFIC CENSUS REPORT
(6) = 1998 CALTRANS COUNT BOOK (PRIOR TO THE COMPLETION OF SR-86(S))
(7) = CORAL MOUNTAIN AT LaQuinta (ENDO ENGINEERING, 1999)
(8) = RIVERSIDE CO. TRAFFIC COUNT DATABASE
(9) = CENTRE AT LaQuinta
(10) = THERMAL AIRPORT 1995

LEGEND.

10.0 (1) = VEHICLES PER DAY IN 1000'S (SOURCE)

AND ASSOCIATES INC.

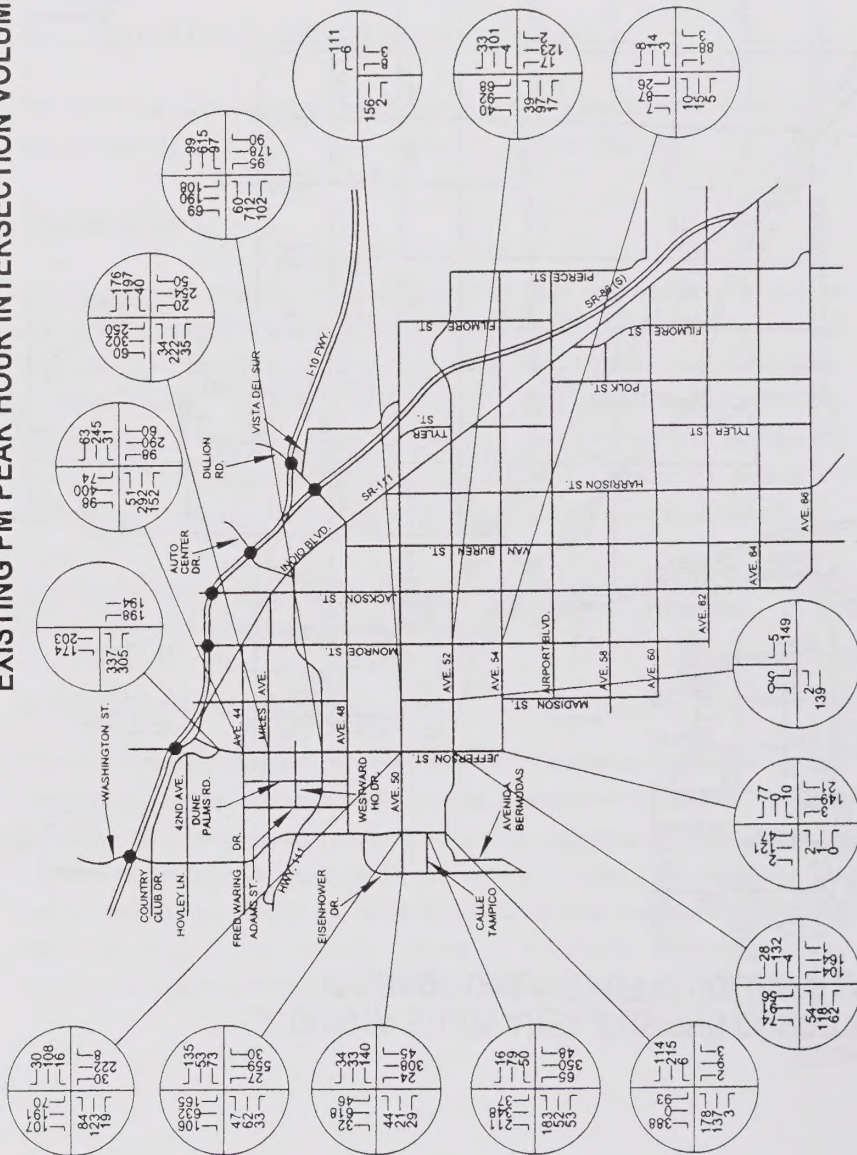
EXHIBIT 2-C EXISTING AM PEAK HOUR INTERSECTION VOLUMES



0341-06-06-24A
REV 06/16/00
LA QUINTA TRAFFIC MODEL, La Quinta, California

RKJK
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EXHIBIT 2-D EXISTING PM PEAK HOUR INTERSECTION VOLUMES



0341-06-06-25A
REV 06/16/00
LA QUINTA TRAFFIC MODEL, La Quinta, California

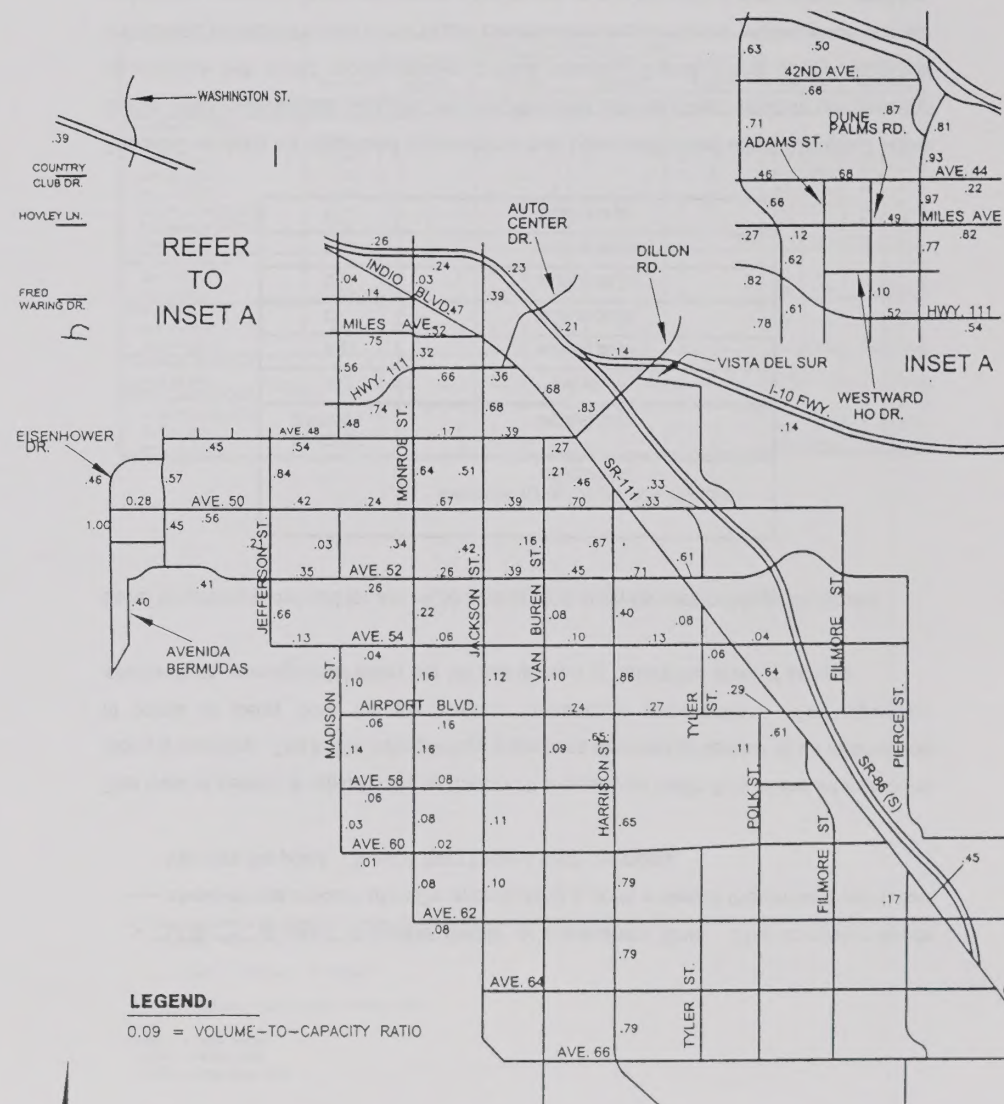
RKJK
ASSOCIATES, INC.

TABLE 2-1

ROADWAY FUNCTIONAL CLASSIFICATION

CLASSIFICATION	PER LANE DAILY CAPACITY	LANE CONFIGURATION	DAILY CAPACITY (ADT)
Freeway	20,000/LN	8D	160,000
Freeway	20,000/LN	6D	120,000
Freeway	20,000/LN	4D	80,000
Augmented Major	9,500/LN	8D	76,000
Major	9,500/LN	6D	57,000
Primary	9,500/LN	4D	38,000
Secondary	7,000/LN	4U	28,000
Collector	7,000/LN	2U	14,000
Local	4,500/LN	2U	9,000

EXHIBIT 2-E LA QUINTA STUDY AREA EXISTING CONDITIONS DAILY VOLUME-TO-CAPACITY RATIOS



The current technical guide to the evaluation of intersection peak hour traffic operations is the 1997 Highway Capacity Manual (HCM) (Transportation Research Board Special Report 209). The HCM defines level of service as a qualitative measure which describes operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used to evaluate LOS (Level of Service) conditions vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted.

The definitions of level of service for uninterrupted flow (flow unrestrained by the existence of traffic control devices) are:

- LOS "A" represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.
- LOS "B" is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.
- LOS "C" is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream.
- LOS "D" represents high-density but stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.
- LOS "E" represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Small increases in flow will cause breakdowns in traffic movement.

- LOS "F" is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations.

The level of service is typically dependent on the quality of traffic flow at the intersections along a roadway. The HCM methodology expresses the level of service at an intersection in terms of delay time for the various intersection approaches. For signalized intersections, average total delay per vehicle is used to determine level of service.

Level of service is defined for the HCM intersection analysis methodology as follows:

LEVEL OF SERVICE	AVERAGE TOTAL DELAY PER VEHICLE (SECONDS)
	SIGNALIZED
A	0 to 10.00
B	10.01 to 20.00
C	20.01 to 35.00
D	35.01 to 55.00
E	55.01 to 80.00
F	80.01 and up

The LOS analysis for signalized intersections has been performed using optimized signal timing. This analysis has included an assumed lost time of three seconds per phase in accordance with HCM recommended default values. Signal timing optimization has considered pedestrian safety and signal coordination requirements. Appropriate time for pedestrian crossings have also been considered in the signalized intersection analysis. Saturation flow rates of 1,900 vehicles per hour of green (vphg) have been assumed for all capacity analysis.

Based on the intersection analysis presented in Table 2-2, study area intersections are anticipated to operate at an acceptable Level of Service (LOS "D" or better) under existing conditions. Appendix "A" contains the intersection analysis worksheets.

Existing City and County Circulation Elements

Exhibit 2-F illustrates the current City of La Quinta's General Plan Circulation Element roadway classifications for existing and future roadways in the study area. The LQTM has used this exhibit as a basis for classifying the roadway system throughout the City. Primary access to the General Plan study area is provided via Washington Street to the I-10 Freeway and State Highway 111.

The Riverside County roadway classifications are shown on Exhibit 2-G. The updated City of La Quinta General Plan study area extends easterly to SR-111 and southerly to Avenue 64.

The City of La Quinta's typical roadway cross-sections are illustrated on Exhibit 2-H. Table 2-1 presented previously, identifies the assumed number of lanes and the corresponding roadway capacities for the various roadways indicated on Exhibit 2-H. RKJK has identified an additional roadway classification for high-capacity (8-lane) roadway segments. The new cross-section (labeled as an "Augmented Major") is discussed in Section 4.0 of this traffic study report.

The existing City circulation system is in the early stages of development and consists of a modified grid system of two and four lane roadways with primarily a north-south orientation. Roadways in the eastern, less developed portion of the community generally follow section lines. The topographic constraints imposed by the Santa Rosa and Coral Reef Mountains to the south and west of La Quinta have resulted in a modified grid system of curvilinear roadways in the Cove and Village areas. Many roadways are two-lanes, many without curbs and gutters. Four lane roadway sections and accompanying improvements are found on major arterials, primarily where development has occurred.

TABLE 2-2
INTERSECTION ANALYSIS FOR EXISTING CONDITIONS

INTERSECTION	TRAFFIC CONTROL ³	INTERSECTION APPROACH LANES ¹										DELAY ² (SECS)		LEVEL OF SERVICE			
		NORTH-BOUND			SOUTH-BOUND			EAST-BOUND		WEST-BOUND							
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Jefferson St. (NS) at:																	
• SR-111 (EW)	TS	1	1	1	1	1	1	0	2	1	1	2	1	22.8	27.7	C	C
• Ave. 50 (EW)	AWS	0	1	1	0	1	1	0	1	0	1	1	1	11.5	12.7	B	B
• Ave. 52 (EW)	AWS	1	1	0	1	2	1	1	1	0	1	2	0	11.4	10.4	B	B
• Ave. 54 (EW)	AWS	1	1	1	0	1	0	1	1	0	1	1	0	9.6	8.8	A	A
• Country Club Dr. (EW)	AWS	1	1	0	0	1	1>>	1	0	1	0	0	0	12.0	15.0	C	C
• Fred Waring Dr. (EW)	TS	1	1	1	1	1	1	1	2	1	1	2	1	14.5	14.6	B	B
• Miles Ave. (EW)	AWS	0	1	1	0	1	1	0	1	0	1	1>>	14.7	15.4	C	C	
Madison St. (NS) at:																	
• Ave. 50 (EW)	CSS	0	1	0	0	0	0	0	1	0	0	1	0	9.2	9.8	A	A
• Ave. 52 (EW)	CSS	0	0	0	0	1	0	0	1	0	0	1	0	9.9	10.0	A	A
Monroe St. (NS) at:																	
• Ave. 52 (EW)	AWS	0	1	0	0	1	0	0	1	0	0	1	0	9.3	9.1	A	A
• Ave. 54 (EW)	CSS	0	1	0	0	1	0	0	1	0	0	1	0	10.4	10.3	B	B
Eisenhower Dr. (NS) at:																	
• Ave. 50 (EW)	TS	1	2	1	1	2	1	0	2	0	1	1	1	26.6	28.1	C	C
Washington St. (NS) at:																	
• Calle Tampico (EW)	TS	1	2	1	1	2	1	1	1	1	1	1	0	24.2	27.1	C	C
• Ave. 50 (EW)	TS	1	2	0	1	1	1	1	1	1	1	1	0	34.0	37.3	C	D
• Ave. 52 (EW)	TS	0	1	0	1.5	0.5	1>	2	2	1	1	2	1	33.0	36.0	C	D

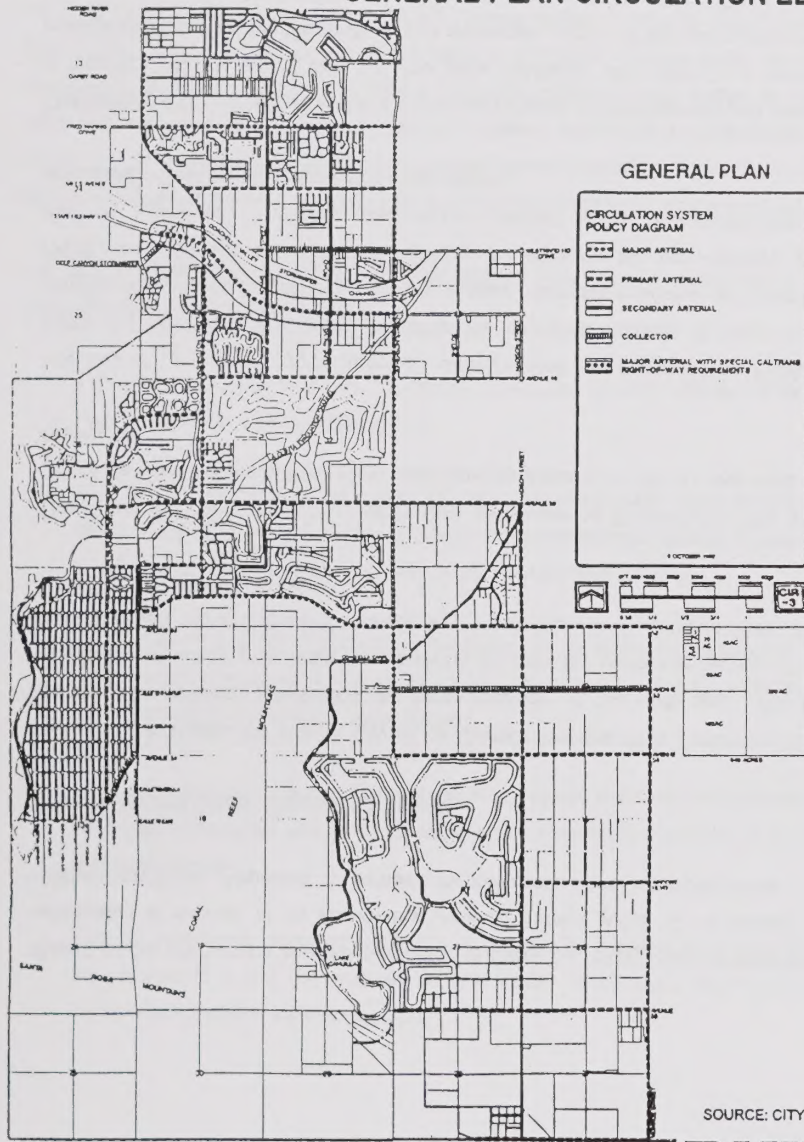
1 When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right

2 Analysis Software: Traffix, Version 7.1.0607 (1999).

3 TS = Traffic Signal
AWS = All Way Stop
CSS = Cross Street Stop

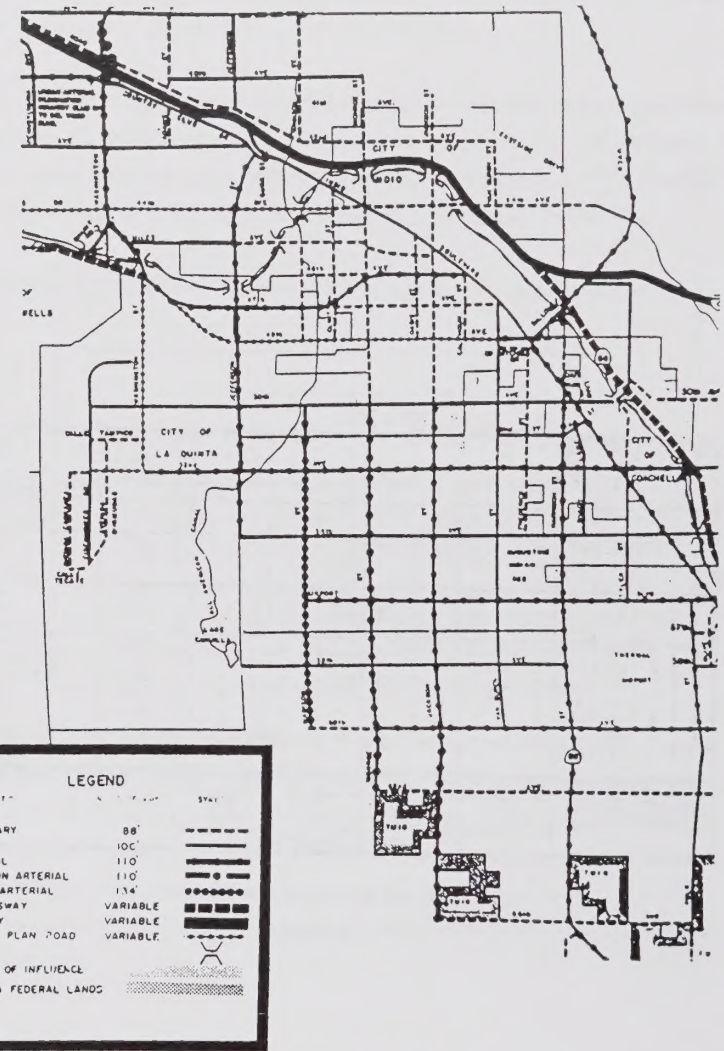
EXHIBIT 2-F
CITY OF LA QUINTA
GENERAL PLAN CIRCULATION ELEMENT



SOURCE: CITY OF LA QUINTA

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& ASSOCIATES INC.

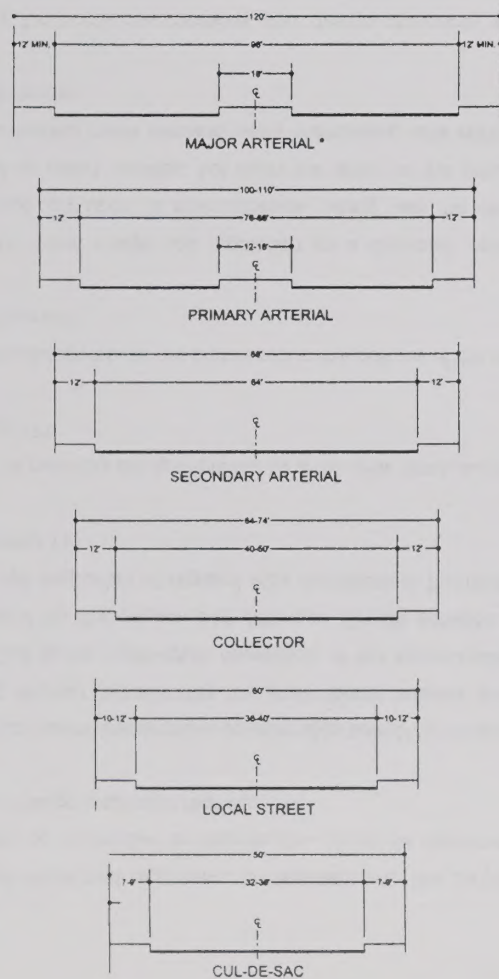
EXHIBIT 2-G
RIVERSIDE COUNTY
GENERAL PLAN CIRCULATION ELEMENT



SOURCE: COUNTY OF RIVERSIDE

RKJK
& ASSOCIATES INC.

EXHIBIT 2-H
CITY OF LA QUINTA
GENERAL PLAN ROADWAY CROSS-SECTIONS



SOURCE: CITY OF LA QUINTA

Key roadways in the City of La Quinta include the following:

- State Route (Highway) 111 – This east-west state highway provides regional access to La Quinta and is a major intra-regional and inter-regional route for the Coachella Valley. Highway 111 serves mixed-commercial land uses in the rapidly developing corridor between Washington and Jefferson Streets. The highway also carries a high volume of pass-through trips between other Coachella Valley communities to the east and west.
- Washington Street – This north-south major arterial roadway connects the Cove and Village areas with Highway 111; the residential areas north of the Coachella Valley Stormwater Channel; and the I-10 Freeway, a regional roadway facility located approximately two miles north of La Quinta. The signalized intersection of Washington Street and Highway 111 provides the primary regional access to La Quinta and experiences the highest traffic volumes of any location in the City.
- Jefferson Street – This north-south major arterial roadway parallels Washington Street and connects resort residential land uses (principally PGA West) with Highway 111; the commercial and residential areas north of Highway 111; and I-10 north of the City. Together with Washington Street this roadway provides for the majority of the north-south travel through the existing community.
- Fred Waring Drive – This east-west primary roadway serves the residential uses north of the Coachella Valley Stormwater Channel. Many of the trips served by this facility are pass-through trips between communities located to the east and west of La Quinta.
- Eisenhower Drive – This north-south secondary roadway connects the Cove and Village areas to Washington Street. This roadway provides access to the

La Quinta Hotel and represents an alternative to the La Quinta Hotel and represents an alternative to Washington Street for movement between the Cove and Village areas and Highway 111.

Traffic volumes in La Quinta demonstrate considerable seasonal variation, with the late-winter, early-spring months representing the peak tourist season and highest traffic volume periods. Due to the north-south orientation of the street system, the heaviest traffic flows are found on Washington and Jefferson Streets between Avenue 50 and Highway 111. A high proportion of regional trips contribute to the relatively high traffic volumes along Highway 111.

Washington Street is currently being improved to a six-lane cross section from the I-10 Freeway to Highway 111.

The following key circulation issues are addressed in the policies of the existing City of La Quinta Circulation Element:

- The City's resort image and reputation as a desirable vacation destination depend not only upon its environmental setting near the mountains and the quality of its resort facilities, but upon the ability of the circulation system to serve increasing travel demand while maintaining and reinforcing the City's unique character.
- Roadway functional classifications and design standards should be based upon current estimates of buildout land use which reflect approved development projects.
- Roadway design standards should be based upon design objectives reflecting the desired character of the surrounding area as well as upon forecasted travel demand. Special design standards, in some cases in conjunction with the development of specific plans, are desirable for the Village, Calle Tampico, the

area affected by the Rural Residential Overlay, and the Highway 111 Corridor to reflect the desired character of the surrounding areas.

- Highway 111 is continuing to develop as an important commercial corridor. Specific design criteria, most importantly those controlling intersection spacing, turning access, and driveway locations should be developed which conform to plans for the facility and provide for needed access to land uses while maintaining the through-capacity of the roadway.
- Alternative circulation system improvements need to be developed to relieve traffic congestion along Washington Street.
- Traffic impacts resulting from development should be identified through a mandatory traffic impact analysis process.
- The intersection of Highway 111 and Washington Street experiences high traffic volumes and becomes congested during peak travel times.
- Several river crossings are subject to flooding during heavy rains. Improvements may be required to existing bridges and new crossings may be necessary depending on new development and traffic volumes.
- A traffic monitoring program is necessary to monitor the need for future improvements, including road and bridge widenings.
- The circulation system should be designed and maintained to encourage walking, bicycling and transit utilization as alternatives to automobile travel. Improvements to existing transit service should be considered, including provision of additional transit stops on major roadways and covered bus shelters at all existing and future stops.

- Pedestrian and bicycle networks should be developed which link activity centers in order to facilitate recreational walking and biking and to establish non-automotive transportation as a viable alternative to driving.

3.0 TRAFFIC MODEL DESCRIPTION

This section of the report describes the operational procedures and data input formats of the new City traffic model. The subdivision of the modeling area into a representative zone system and the representation of the roadway network are described. The procedures utilized for trip generation and distribution, and assignment of traffic to the roadway network are discussed.

The Coachella Valley Area Transportation Study (CVATS) model was developed by the Southern California Association of Governments (SCAG) to analyze regional transportation needs for the Coachella Valley. This TRANPLAN-based model is currently used by most of the agencies in the Valley to develop their long-range transportation plans. TRANPLAN (TRANsportation PLANning) is a modeling software package that is used throughout Riverside County and in developing the (LQTM).

The traffic analysis zone structure (boundaries used to aggregate land uses) and the circulation system used in the CVATS model does not include sufficient detail to provide refined forecasts required by the City of La Quinta. To address these deficiencies, the La Quinta Traffic Model (LQTM) was developed as a focused model version of the Coachella Valley Area Traffic Study (CVATS) Model. Additional detail has been incorporated into the model primary study area in the City of La Quinta and adjacent areas. Outside the model primary study area, the roadway network and traffic analysis zone (TAZ) structure of the CVATS Model has been generally maintained in its entirety.

Network processing (assigning speeds and capacities to all roadway links based on facility classification), trip generation, and trip distribution procedures of the LQTM have been adapted directly from the CVATS model. However, the traffic assignment procedures incorporated into the LQTM have been based on the Comprehensive Transportation Plan (CTP) model job stream. Specifically, the CTP assignment algorithms include four peak time periods (AM, Mid-day, PM & Night) rather than the single daily assignment process used in the CVATS model. This approach was undertaken to allow

CVATS TRAFFIC ANALYSIS ZONE (TAZ) STRUCTURE IN THE LA QUINTA STUDY AREA

the LQTM greater flexibility in developing the individual peak period assignments. The use of the four time period assignment allows the LQTM to evaluate the effects of congestion and directionally in developing future forecasts.

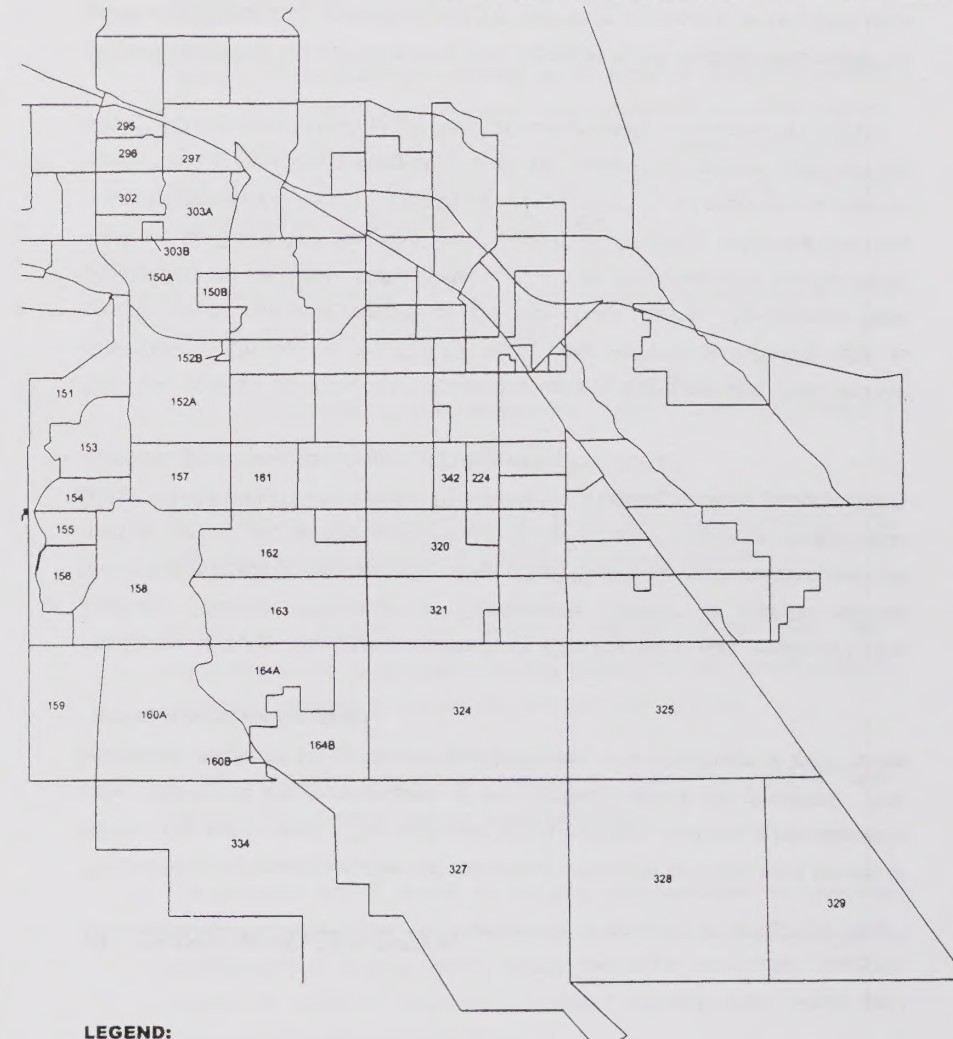
The computer modeling process consists generally of seven individual but interrelated steps. These are:

- Definition of a traffic analysis zone system;
- Definition of a roadway network to serve the zone system;
- Determination of efficient and logical route paths through the network between the individual traffic analysis zones;
- Collection of land use data for each of the traffic analysis zones;
- Determination of trip generation within each traffic analysis zone;
- Determination of the distribution of trip ends between the traffic analysis zones for several trip purposes; and
- Conversion of daily trips to time period trip tables and assignment of trips to the individual roadway segments of the overall roadway network.

Zone System

To produce a forecast of traffic volumes within the modeling area, traffic must be loaded onto the roadway network in a manner which approximates how traffic enters and uses the real roadway system. The CVATS primary study area traffic analysis zone (TAZ) system is shown on Exhibit 3-A. The primary study area includes all of the City of La Quinta and key areas of adjacent jurisdictions. The LQTM structure was created from existing CVATS zone boundaries, general plan land use boundaries, digital street centerlines using ArcCAD software tools and consultations with Terra Nova and City staff. The detailed TAZ structure within the City of La Quinta is presented on Exhibit 3-B.

Each TAZ represents the area where traffic is generated (expressed as a number of trip "productions" and "attractions") by the land uses in that TAZ. During the trip distribution



LEGEND:

334 = CVATS TRAFFIC ANALYSIS ZONE (TAZ)



Table 3-2 presents the roadway characteristics which were coded in the LQTM network. Other items coded into the network included the number of lanes and free flow speed

EXHIBIT 3-C



- = LOTM TRAFFIC ANALYSIS ZONE (TAZ)
 STRUCTURE
 ■■■■■ = CVATS TRAFFIC ANALYSIS ZONE (TAZ)
 STRUCTURE

Z

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LA QUINTA TRAFFIC MODEL, La Quinta, California

RKJK
A ASSOCIATES INC.

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CVATS/LQTM ZONE CORRESPONDENCE

3-7

TABLE 3-1

CVATS/LQTM ZONE CORRESPONDENCE

CVATS TAZ	LA QUINTA TAZ
159	995
160	993
160	994
160	1006
161	938
161	940
161	942
162	954
162	955
162	957
162	962
162	965
163	977
163	979
163	1056
164	984
164	985
164	986
164	996
164	1000
164	1004
164	1005
224	932
295	632
295	635
295	648
295	1054
296	656
296	659
296	660
297	651
297	655
302	685
302	687
302	713
303	686
303	700
303	721
303	728
303	734
320	956
320	959

TABLE 3-1

CVATS/LQTM ZONE CORRESPONDENCE

CVATS TAZ	LA QUINTA TAZ
320	960
321	975
321	976
321	1041
324	983
324	991
324	992
324	1001
324	1002
324	1003
325	982
325	989
325	990
325	997
325	998
325	999
327	1014
327	1016
327	1017
327	1019
327	1034
327	1035
327	1036
327	1048
327	1049
327	1051
328	1011
328	1012
328	1013
328	1020
328	1022
328	1025
328	1026
328	1031
328	1032
328	1033
328	1040
328	1045
328	1046
328	1047
328	1052
329	1008

TABLE 3-1

CVATS/LQTM ZONE CORRESPONDENCE

CVATS TAZ	LA QUINTA TAZ
329	1009
329	1010
329	1023
329	1027
329	1028
329	1029
329	1030
329	1039
329	1042
329	1043
329	1044
334	1007
334	1018
334	1021
334	1024
334	1037
334	1038
334	1050
342	936
725	741

TABLE 3-2

CVATS/LQTM NETWORK CHARACTERISTICS

FACILITY TYPE	FACILITY CLASS	FREE FLOW SPEED (MPH)	CAPACITY VEHICLES/LANE-HOUR
1	Freeway	65	1,950
2	Ramps	30	1,000
3	State Route	40-50	800
4	Major Arterial	45	800
5	Secondary Arterial	35	600
6	Collector	30	600
7	Centroid Connector	15	9,000
8	Subregional Expressway/Parkway	50	800

adjustments. These speed adjustments were developed to increase sensitivity to roadway constraints. The speed adjustments were made by embedding a code in the tens column of the Link Group 3 (LG3) field of the LQTM link data set (For example, if a roadway link contained a 2 in the tens column of the LG3 data field, TRANPLAN would increase the speed on that link by 5 miles per hour). The utility of this feature allows the user to move traffic onto roadways that have higher speeds and capacities. The region outside the primary study area retained the original CVATS area type classifications. The distinct Link Group 3 codes are:

LINK GROUP 3 CODE (TENS COLUMN)	SPEED ADJUSTMENT
0	No Speed Adjustment
1	+3 miles per hour
2	+6 miles per hour
3	+9 miles per hour
5	-3 miles per hour
6	-6 miles per hour
7	-9 miles per hour

Trip Generation

The trip generation procedure for the CVATS Model is implemented as a stand alone program, with the number of TAZ's coded in as a fixed value. The LQTM trip generation procedure has, therefore, been recreated by RKJK staff to allow for the additional TAZ's included in the LQTM. The SCAG documentation of the CVATS model (September 1994) and direct discussion with the developer of the CVATS model stand alone trip generation procedure have both been consulted by RKJK, as certain modifications to the trip generation procedure which evolved during CVATS model validation process are not described in the documentation.

LQTM Trip Generation Methodology Overview

The following land use variables are utilized in the CVATS model and also in the LQTM trip generation procedures:

- RES 1 - Very Low Density Residential (0 - 2 dwelling units per acre).
- RES 2 - Low Density Residential (3 - 6 dwelling units per acre).
- RES 3 - Medium Density Residential (7 - 15 dwelling units per acre).
- RES 4 - High Density Residential (16 - 21 dwelling units per acre).
- RES 5 - Very High Density Residential (22 + dwelling units per acre).
- TOUR - Tourist Facilities, Resort, Hotels, etc.
- PARK - Parks and Golf Courses, etc.
- COMM - General and Neighborhood Commercial Centers, Central Business Districts, etc.
- PUBL - Public Facilities (Fire Stations, etc.).
- OFFI - Professional Offices, Government Buildings, Health Care Facilities, etc.
- LIND - Light Industrial Uses.
- HIND - Heavy Industrial Uses.
- SCH - Schools (all levels).

In addition, land use defined as transportation/public utilities (power line easements, etc.) and open space (vacant land, agricultural uses, preserves, etc.) are also included in the land use databases to account for all of the acreage (land area) within each traffic analysis zone (TAZ). All of the land use variables are defined in terms of acres of use.

The total number of trips produced in or attracted to a geographical area is directly related to the land use and demographic variables of each TAZ. Characteristics of the household and land use type, all function to influence the number of trips produced by and attracted to a particular transportation analysis zone.

The LQTM trip generation model estimates the number of peak season vehicle trips produced on an average weekday for each analysis zone. In the LQTM special consideration is given to seasonal peak trips to address the traffic fluctuation that occurs when visitors and part-time residents from colder climates stay temporarily in the Coachella Valley. These seasonal population increases result in increased travel demand (trips). Trips are estimated by five trip types:

- (1) Home-Based Work (HBW)
- (2) Home-Based Social/Recreational (HBSR)
- (3) Home-Based Shopping/Personal Business (HBSHPB)
- (4) Home-Based School (HBSCH)
- (5) Non-Home-Based (NHB)

The Home-Based trip is defined as a trip originating at home or where the trip destination is home. The first four categories of trips described above are examples of Home-Based trips. The Non-Home-Based trip type refers to trips that do not originate at home or do not have a destination at home, (e.g., traveling from work directly to dinner).

Trip Generation Rate Development

The LQTM daily trip rates and trip purpose percentages are included in Table 3-3. The daily trip rates and percentages have been derived from the CVAG 1995 O-D survey data, as well as the trip generation data resulting from the 1997 CVATS validation scenario. Previous RKJK experience in developing acreage based trip rates for non-residential uses has also been applied.

It should be noted that City staff has reviewed and approved the indicated trip generation rates.

TABLE 3.3
TRIP GENERATION RATES SUMMARY

LAND USE DESCRIPTION	UNITS	DAILY TRIP RATE	PRODUCTIONS					ATTRactions							PERCENTAGES		
			Home Based Work (HBW)	Home Based Social/Recreation (HBSR)	Home Based Shopping/Personal Business (HBSBP)	Home Based School (HBSCH)	Non Home Based (NHB)	ETOE	ITOE	Home Based Work (HBW)	Home Based Social/Recreation (HBSR)	Home Based Shopping/Personal Business (HBSBP)	Home Based School (HBSCH)	Non Home Based (NHB)	ETOE	Total %	
Res 1-Very Low Density (0-2 du/ac)	Acres	4	17%	17%	17%	38%	5%	5%	0%	2%	2%	5%	2%	5%	2%	0%	100.0%
Res 2-Low Density (3-6 du/ac)	Acres	15	17%	17%	17%	38%	5%	5%	0%	2%	2%	5%	2%	5%	2%	0%	100.0%
Res 3-Med. (7-15 du/ac)	Acres	37	17%	17%	17%	38%	5%	5%	0%	2%	2%	5%	2%	5%	2%	0%	100.0%
Res 4-High (16-21 du/ac)	Acres	55	15%	18%	41%	41%	5%	5%	0%	1%	2%	5%	2%	5%	1%	0%	100.0%
Res 5-Very High (22+ du/ac)	Acres	67	15%	18%	41%	41%	5%	5%	0%	1%	2%	5%	2%	5%	1%	0%	100.0%
TOUR-Tourist Resort/Hotel	Acres	250	0%	0%	0%	0%	2%	2%	0%	1%	12%	7%	25%	27%	1%	0%	100.0%
PARK-Park, Golf Course, etc.	Acres	8	0%	0%	0%	0%	15%	15%	0%	1%	10%	55%	3%	15%	1%	0%	100.0%
COMM-Gen. & Neigh. Comm., CBD, etc.	Acres	350	0%	0%	0%	0%	20%	20%	0%	1%	10%	9%	39%	20%	1%	0%	100.0%
PUBL-Public Facility/Fire stations, etc.)	Acres	40	0%	0%	0%	0%	20%	20%	0%	1%	56%	1%	1%	20%	1%	0%	100.0%
OFF-Gov. Bldgs. Health Care, etc.	Acres	220	0%	0%	0%	0%	19%	19%	0%	1%	15%	45%	45%	19%	1%	0%	100.0%
IND-Light Ind	Acres	110	0%	0%	0%	0%	21%	21%	0%	1%	45%	11%	11%	21%	1%	0%	100.0%
IND-Heavy Ind	Acres	70	0%	0%	0%	0%	21%	21%	0%	1%	45%	11%	11%	21%	1%	0%	100.0%

Trip Distribution

Once the trip generation within each TAZ has been calculated, the distribution of trips between zones where trips are produced and zones where trips are attracted must be determined. Generally, trip production refers to the origin end of the trip, whereas trip attraction refers to the destination end of a trip. For example, a residence can be considered a trip producer in the morning, and a place of employment (office building) can be considered a trip attractor. In the traffic model, this function is achieved using a "gravity" distribution model. The Gravity Model makes the assumption that all trips starting from a given zone are attracted to various traffic generators in other zones. The strength of this attraction is based on the relative size of the traffic zones and the distance between them. For example, a trip produced at a residence (trip production) will be more attracted to an office development (trip attractor) that is larger and closer than a similar development that is smaller and farther away. The gravity model is utilized because it has been demonstrated to perform reasonably well and is widely accepted.

The gravity distribution model is based on the well known gravity formula, where the distribution of trips is proportional to the attractiveness of a land use and the distance (or travel time) from the point of trip production. The propensity to favor trips over shorter distances as opposed to trips over longer distances in the distribution process is expressed in terms of a travel time distribution function or curve. A unique distribution curve is utilized for each trip purpose. These curves reflect the tendency of trips to be made over longer distances for employment purposes, while trips for non-employment purposes, such as shopping, are generally shorter.

Each distribution curve is represented in the gravity formula through travel time friction factors which identify the curve for different elements of time. The LQTM friction factors are summarized in Table 3-4. The friction factors have been expanded from 33 minutes per the CVATS model to 60 minutes. This refinement has been incorporated into the

TABLE 3-4
LA QUINTA TRAFFIC MODEL - FRICTION FACTORS

MINUTES	Home Based Work (HBW)	Home Based Social Recreation (HBSR)	Home based Shopping-Personal Business (HBSBP)	Home Based School (HBSCL)	Non Home Based (NHB)	ETOI	ITOE
1	77.929	105.660	108.936	97.215	146.131	146.131	146.131
2	76.688	85.416	82.800	91.500	108.691	108.691	108.691
3	73.993	69.512	63.863	85.349	82.516	82.516	82.516
4	70.087	56.949	49.954	78.938	63.864	63.864	63.864
5	65.260	46.971	39.602	72.429	50.329	50.329	50.329
6	59.813	39.002	31.799	65.962	40.337	40.337	40.337
7	54.033	32.605	25.847	59.656	32.839	32.839	32.839
8	48.174	27.443	21.253	53.607	27.124	27.124	27.124
9	42.445	23.255	17.668	47.887	22.702	22.702	22.702
10	37.006	19.842	14.840	42.546	19.232	19.232	19.232
11	31.969	17.045	12.586	37.617	16.469	16.469	16.469
12	27.402	14.744	10.772	33.113	14.241	14.241	14.241
13	23.334	12.841	9.298	29.036	12.418	12.418	12.418
14	19.767	11.262	8.089	25.376	10.907	10.907	10.907
15	16.680	9.945	7.088	22.115	9.638	9.638	9.638
16	14.039	8.844	6.252	19.228	8.557	8.557	8.557
17	11.802	7.920	5.548	16.687	7.626	7.626	7.626
18	9.922	7.142	4.950	14.464	6.812	6.812	6.812
19	8.353	6.486	4.437	12.527	6.092	6.092	6.092
20	7.052	5.931	3.994	10.846	5.449	5.449	5.449
21	5.977	5.463	3.608	9.394	4.868	4.868	4.868
22	5.094	5.067	3.268	8.142	4.338	4.338	4.338
23	4.370	4.734	2.968	7.066	3.852	3.852	3.852
24	3.779	4.454	2.699	6.143	3.404	3.404	3.404
25	3.299	4.220	2.457	5.353	2.990	2.990	2.990
26	2.911	4.028	2.238	4.678	2.608	2.608	2.608
27	2.599	3.872	2.038	4.101	2.255	2.255	2.255
28	2.352	3.749	1.855	3.610	1.932	1.932	1.932
29	2.160	3.657	1.685	3.191	1.637	1.637	1.637
30	2.016	3.593	1.528	2.835	1.370	1.370	1.370
31	1.913	3.555	1.382	2.532	1.132	1.132	1.132
32	1.851	3.544	1.246	2.275	922	922	922
33	1.826	3.559	1.119	2.057	739	739	739
34	1.758	3.427	1.078	1.981	712	712	712
35	1.690	3.295	1.037	1.905	685	685	685
36	1.622	3.163	996	1.829	658	658	658
37	1.554	3.031	955	1.753	631	631	631
38	1.486	2.899	914	1.677	604	604	604
39	1.418	2.767	873	1.601	577	577	577
40	1.350	2.635	832	1.525	550	550	550
41	1.282	2.503	791	1.449	523	523	523
42	1.214	2.371	750	1.373	496	496	496
43	1.146	2.239	709	1.297	469	469	469
44	1.078	2.107	668	1.221	442	442	442
45	1.010	1.975	627	1.145	415	415	415
46	942	1.843	586	1.069	388	388	388
47	874	1.711	545	993	361	361	361
48	806	1.579	504	917	334	334	334
49	738	1.447	463	841	307	307	307
50	670	1.315	422	765	280	280	280
51	602	1.183	381	689	253	253	253
52	534	1.051	340	613	226	226	226
53	466	919	299	537	199	199	199
54	398	787	258	461	172	172	172
55	330	655	217	385	145	145	145
56	262	523	176	309	118	118	118
57	194	391	135	233	91	91	91
58	126	259	94	157	64	64	64
59	58	127	53	81	37	37	37
60	1	1	1	1	1	1	1

LQTM structure because of the length of time (about 1 hour) required to travel from one end of the modeling area to the other.

The distribution process is performed uniquely for each trip purpose. The end result of the process is a trip table or matrix for each trip purpose which records the trip interaction between zones on a daily production/attraction basis. Because the production/attraction trip table is not directional, it must be transformed to an origin/destination table through the matrix processes of transposition and factoring. In other words, we now have the amount of trip interaction between zones on a daily basis. To develop peak period trips going from one zone to another, directional factors must be applied to the overall pool of trips to reflect the appropriate trip activity during the peak periods.

The initial LQTM trip distribution model has been obtained directly from the parent CVATS model structure. The CVATS model structure explicitly considers trips up to 33 minutes in length. The LQTM trip distribution data, particularly the friction factor data, has been expanded to explicitly recognize the potential for trips of up to 1 hour, consistent with the actual travel times which the model highway network indicates can occur in crossing the Coachella Valley. The initial LQTM trip distribution data simply expands the friction factor data for 33 minutes out to 60 minutes.

Traffic Assignment

Traffic assignment is the process by which trip interchanges between zones, determined in the distribution process, are assigned to specific route paths in the roadway network. The end result is a forecast of traffic volumes on each roadway link.

The following time periods are used in the LQTM structure:

- AM Peak Period (3 hours, 7 AM to 10 AM).
- Mid-day Period (4 hours, 10 AM to 2 PM).
- PM Peak Period (4 hours, 2 PM to 6 PM).

- Nighttime Period (13 hours, 6 PM to 7 AM).

The assignment procedure used by the LQTM incorporates an equilibrium model to assign trips to the roadway network. This approach differs from CVATS (incremental assignment) but is consistent with the regional methodology.

Once the individual time period assignments have been completed, they are added together to provide the LQTM daily traffic volume estimates.

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4.0 GENERAL PLAN TRAFFIC PROJECTIONS

The La Quinta General Plan Update traffic modeling effort includes four Post-2020 future scenarios. The following inputs for Post-2020 conditions in the primary study area have been developed by RKJK:

- Post-2020 highway network
- Post-2020 land use data for the following scenarios:
 - General Plan Recommended Alternative
 - Existing General Plan
 - General Plan High Alternative
 - General Plan Low Alternative

These inputs have then been used to estimate Post-2020 conditions trip generation, trip distribution, and future traffic volumes. The future traffic volume data includes both daily and peak hour traffic volume forecasts.

Post-2020 LQTM Inputs

Post-2020 LQTM inputs include a future roadway network and future land use data. Outside of the primary study area, the CVATS 2020 scenario which has been recently prepared by SCAG staff, has been used to provide the necessary LQTM network and land use inputs. Within the primary study area, RKJK has updated the more detailed LQTM roadway network to reflect the planned circulation system in the City of La Quinta and adjacent areas. The City of La Quinta Circulation Element was previously presented in this report.

All four land use scenarios were provided by the City of La Quinta in a GIS (Geographic Information Systems) format for the study area. Based on the data provided by the City, further disaggregation was required to provide a direct correspondence with the

LQTM land use inputs. The correspondence categories and factors are presented below and have been previously approved by City staff.

<u>La Quinta Land Use Categories</u>	<u>LQTM Land Use Categories</u>
Very Low Density Residential	Very Low Density Residential
Low Density Residential	Low Density Residential
Medium Density Residential	Low Density Residential
Medium-High Density Residential	Medium Density Residential
High Density Residential	Medium Density Residential
Major Community Facilities	Tourism
Golf Course	Park
Park Facilities	Park
Community Commercial	Commercial
Mixed Commercial	Commercial
Neighborhood Commercial	Commercial
Village Commercial	Commercial
Airport	50% Public Facility
	50% Transportation
Office	Office
Open Space	Open Space
Commercial Park	Light Industrial
Industrial	50 % Light Industrial
	50% Heavy Industrial
Watercourse/Flood Control	Transportation

It should be noted that schools are a category identified in the La Quinta Model but have not been included in the land use provided by the City. Therefore, RKJK has identified existing schools (elementary, middle, and high schools) and manually included them in the trip generation process.

Appendix "B" contains the study area land use for all four scenarios by LQTM zones. The land use data has then been input to the LQTM trip generation procedure described previously in Chapter 3 of this report.

Post-2020 General Plan Alternatives Trip Generation Estimates

Based on the land use data provided for the four Post-2020 General Plan alternatives, and the trip generation rates previously presented in Table 3-3, daily trips by LQTM zones have been determined. An overall summary of the trip generation by General Plan land use alternative is presented in Table 4-1.

As indicated in Table 4-1, the total daily trip-ends range from a low of 934,182 (Existing General Plan Alternative) to a high of 1,261,943 (High Alternative) trips per day for the study area. The General Plan Recommended Alternative generates 1,200,150 daily trip-ends (approximately 28% more than the currently adopted General Plan). It should be noted that the generally accepted transportation modeling practice balances attractions to productions for the overall modeling area. The overall modeling area includes all of the developed portions of the Coachella Valley. This procedure essentially recognizes that the overall level of activity is primarily related to the number of households (trip producers) within the overall modeling area.

Post-2020 LQTM Outputs

The Post-2020 land use and network data has been input to the LQTM and the processes of trip generation, trip distribution, trip table factoring, and traffic assignment have been completed by RKJK.

The future daily traffic volumes have been reviewed using existing daily traffic count data as a basis to compare growth on all roadway segments.

TABLE 4-1

LA QUINTA STUDY AREA TRIP GENERATION ESTIMATES FOR POST-2020 GENERAL PLAN ALTERNATIVES

LAND USE ALTERNATIVE	PRODUCTIONS /ATTRCTIONS	TRIP TYPE							EXTERNAL-TO INTERNAL	INTERNAL-TO EXTERNAL	TOTAL
		HOME- BASED WORK	HOME-BASED SOCIAL RECREATION	HOME- BASED SHOPPING	HOME- BASED SCHOOL	NON- HOME BASED					
GENERAL PLAN RECOMMENDED	PRODUCTIONS	48,082	48,082	107,476	14,140	205,255	-	14,833	-	437,868	
	ATTRCTIONS	186,840	91,326	254,863	9,165	205,255	14,833	-	-	762,282	
	TOTAL	234,922	139,408	362,339	23,305	410,510	14,833	14,833	-	1,200,150	
EXISTING GENERAL PLAN	PRODUCTIONS	34,130	34,130	76,280	10,038	160,618	-	-	-	326,548	
	ATTRCTIONS	146,898	70,758	211,439	6,569	160,618	11,352	-	-	607,634	
	TOTAL	181,028	104,888	287,719	16,607	321,236	11,352	11,352	-	934,182	
GENERAL PLAN HIGH ALTERNATIVE	PRODUCTIONS	56,826	56,826	127,007	16,711	209,899	-	15,965	15,965	483,234	
	ATTRCTIONS	188,911	94,832	259,938	9,164	209,899	15,965	-	-	778,709	
	TOTAL	245,737	151,658	386,945	25,875	419,798	15,965	15,965	-	1,261,943	
GENERAL PLAN LOW ALTERNATIVE	PRODUCTIONS	29,061	29,061	64,958	8,545	184,697	-	-	-	328,347	
	ATTRCTIONS	177,869	81,744	238,146	8,319	184,697	12,025	-	-	702,800	
	TOTAL	206,930	110,805	303,104	16,864	369,394	12,025	12,025	-	1,031,147	

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Exhibits 4-A through 4-D illustrates the Post 2020 volumes throughout the study area. The Post 2020 future forecasts for all General Plan Land Use Alternatives are also shown in Appendix "C" with corresponding volumes-to-capacity ratio calculations illustrated on Exhibits 4-E through 4-H.

In analyzing the future roadway segment operations, the future daily volumes have been divided by the corresponding segment capacities (previously presented in Table 2-1). Based on the calculated volume-to-capacity ratio (V/C), an assessment can be made of how close a segment's volume is to its capacity. For the purposes of this study, a V/C ratio of 0.80 and below is considered within an acceptable level of service for a roadway segment. A V/C ratio between 0.81 and 0.99 is considered to be approaching a segments capacity, or "Near Capacity". Finally, a V/C ratio of 1.0 or greater is considered "Over Capacity".

Although a roadway segment may be identified as exceeding the allowable capacity, intersection improvements may allow the endpoints of a segment to operate acceptably. Typically, the endpoints of a segment (intersections) are the constraints of the transportation system. Furthermore, the LQTM has made general assumptions regarding the access locations of future development. Therefore, based on more specific plans, traffic flows on arterials may change and should be monitored as development applications are processed.

The following 15 roadway segments have been identified as exceeding typical ADT capacities for the Post 2020 General Plan Recommended Alternative scenario, and should be the focus of ongoing traffic monitoring activities:

EXHIBIT 4-A
LA QUINTA STUDY AREA GENERAL PLAN RECOMMENDED ALT.
POST 2020 AVERAGE DAILY TRAFFIC VOLUMES (ADT)

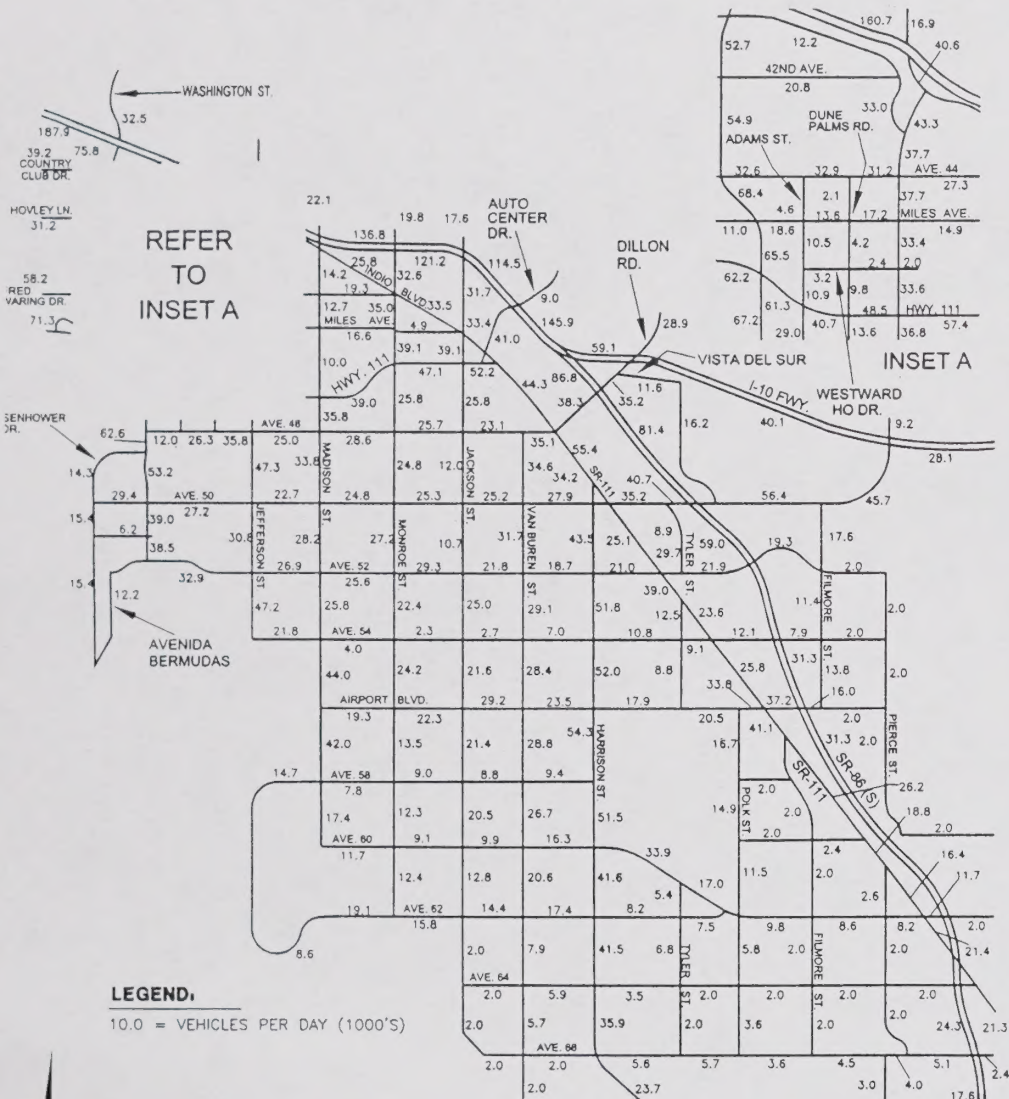


EXHIBIT 4-B
LA QUINTA STUDY AREA EXISTING GENERAL PLAN ALT.
POST 2020 AVERAGE DAILY TRAFFIC VOLUMES (ADT)

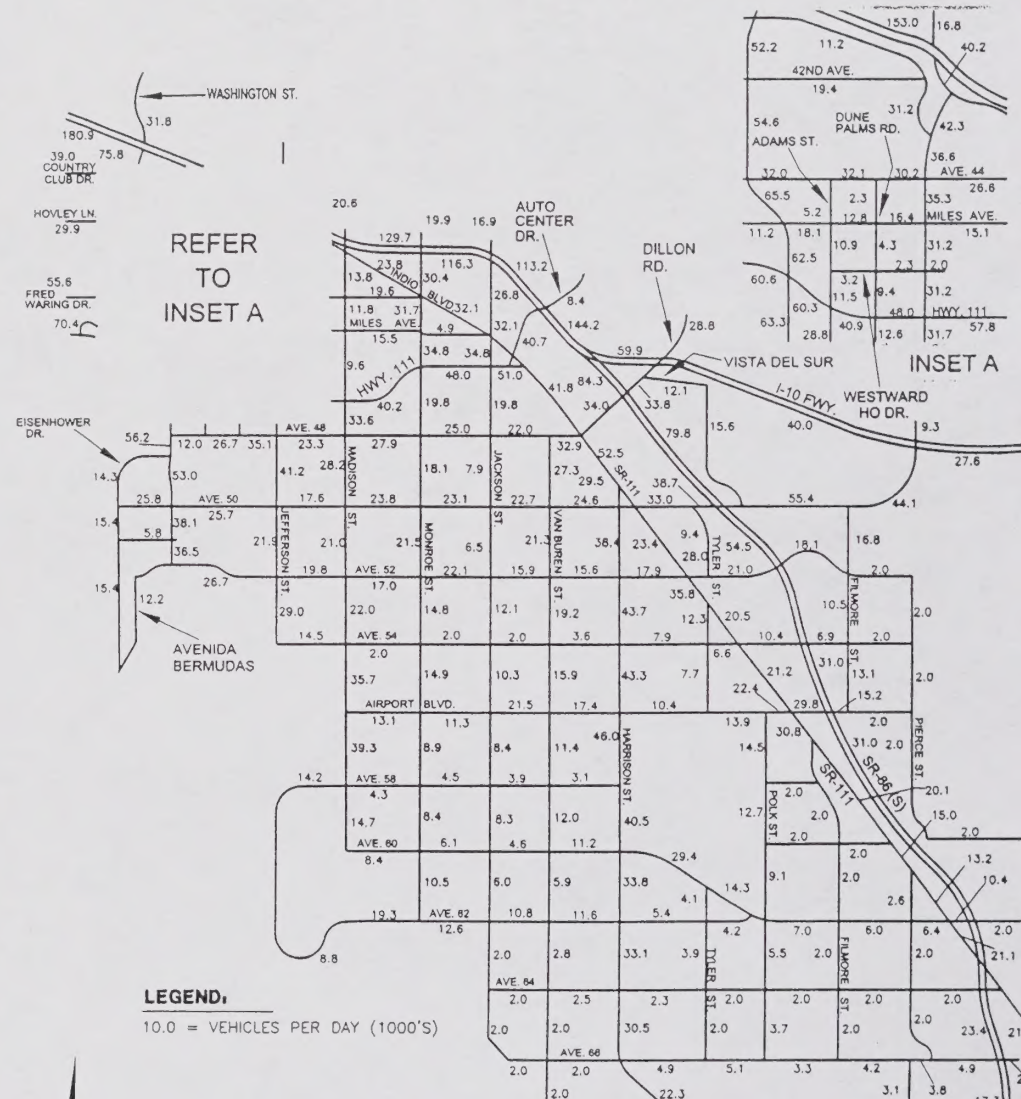
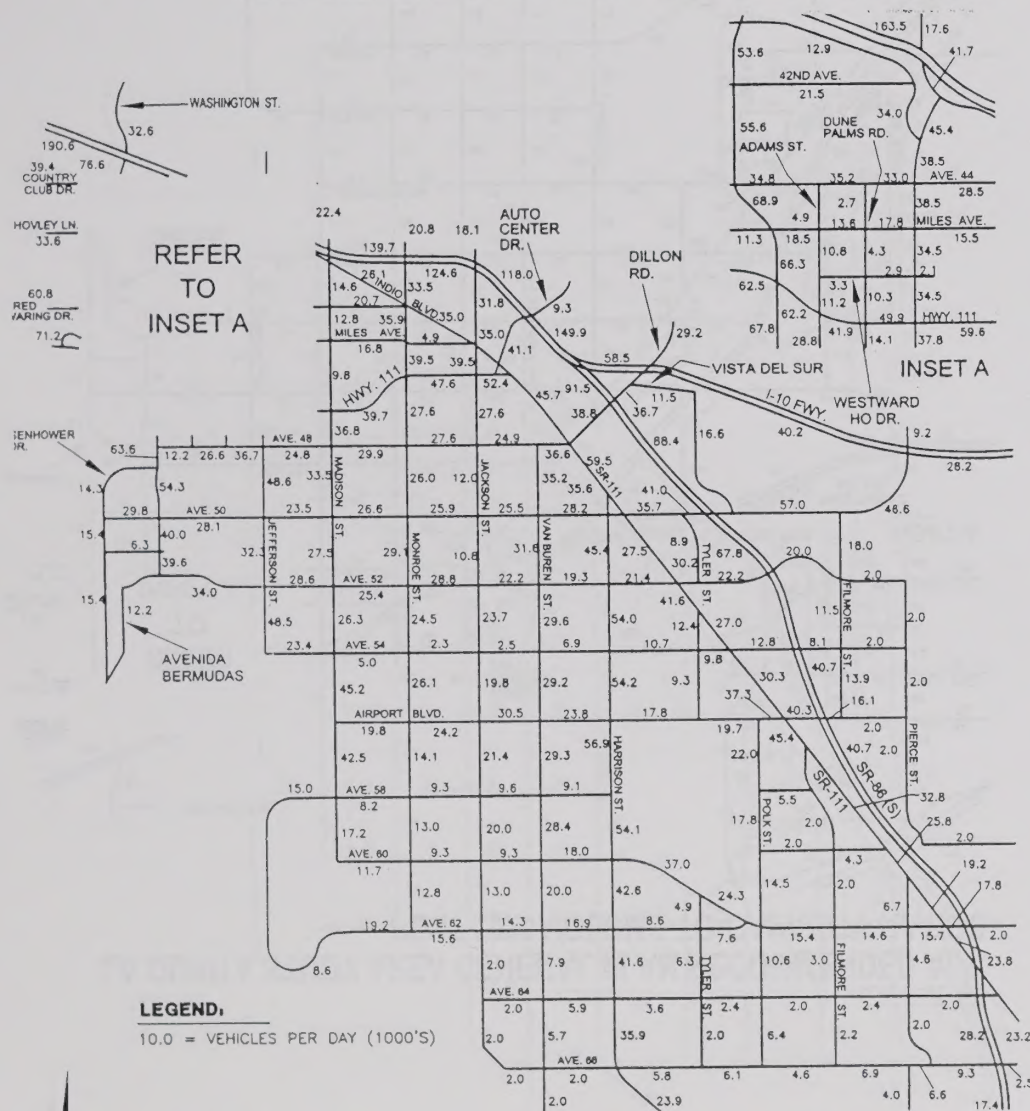
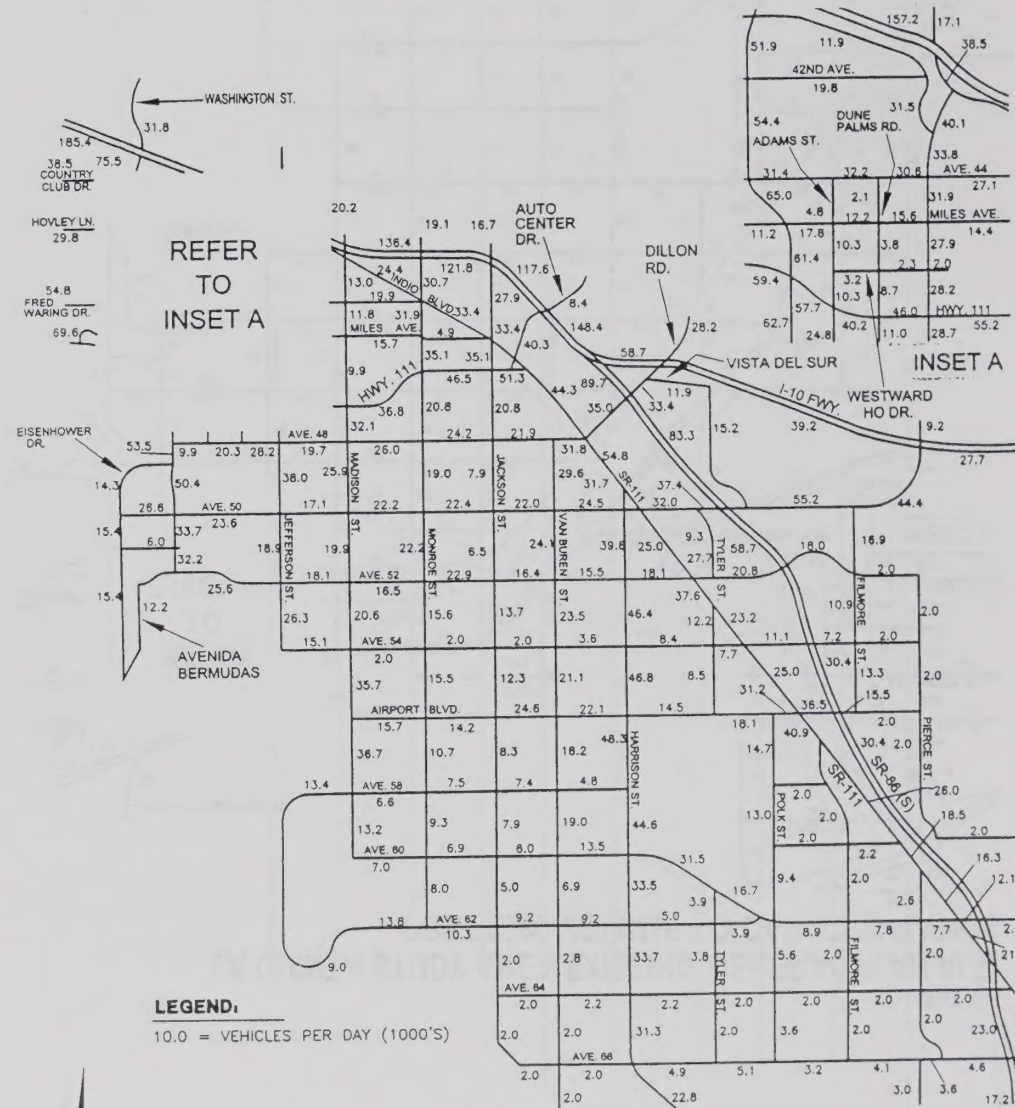


EXHIBIT 4-C
LA QUINTA STUDY AREA GENERAL PLAN HIGH ALT.
POST 2020 AVERAGE DAILY TRAFFIC VOLUMES (ADT)



RKJK
& ASSOCIATES INC.

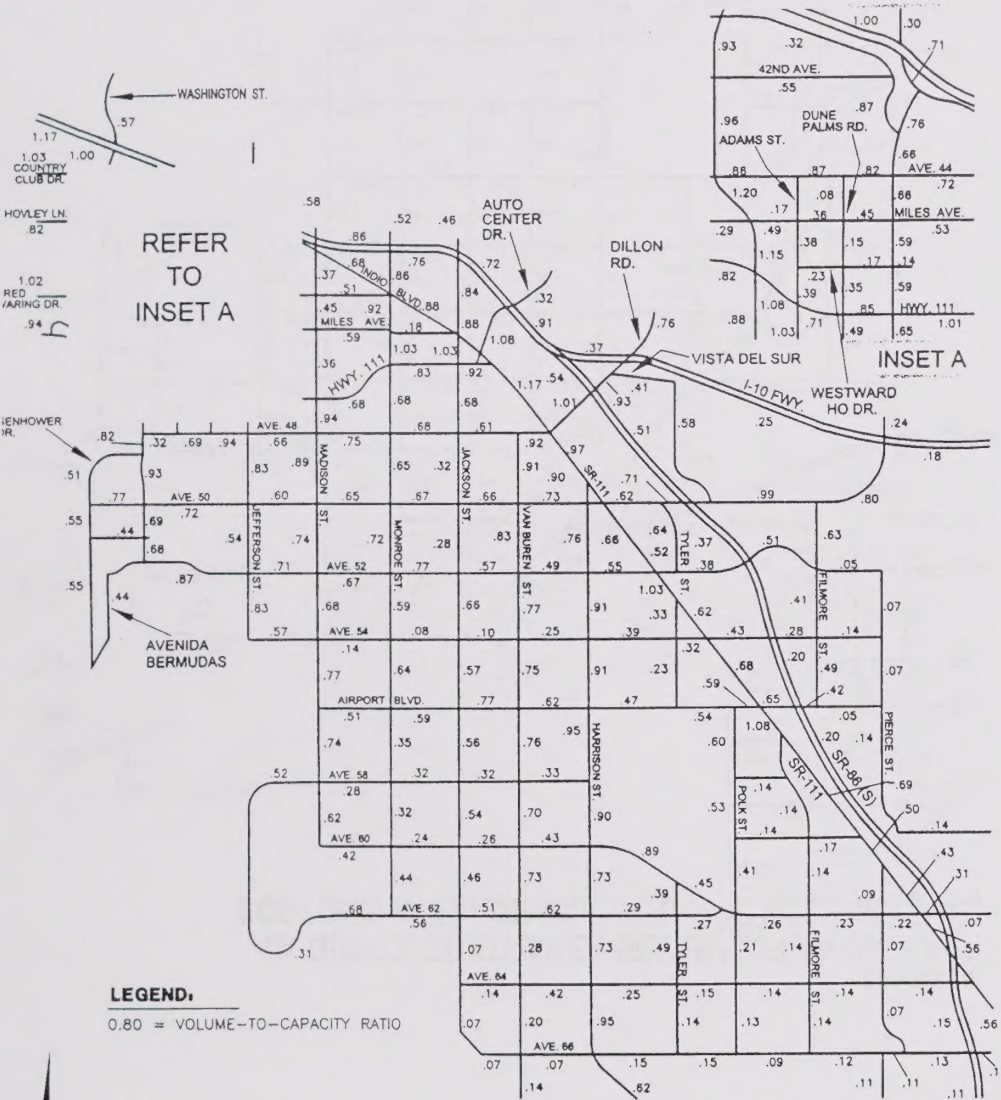
EXHIBIT 4-D
LA QUINTA STUDY AREA GENERAL PLAN LOW ALT.
POST 2020 AVERAGE DAILY TRAFFIC VOLUMES (ADT)



RKJK
& ASSOCIATES INC.

EXHIBIT 4-E

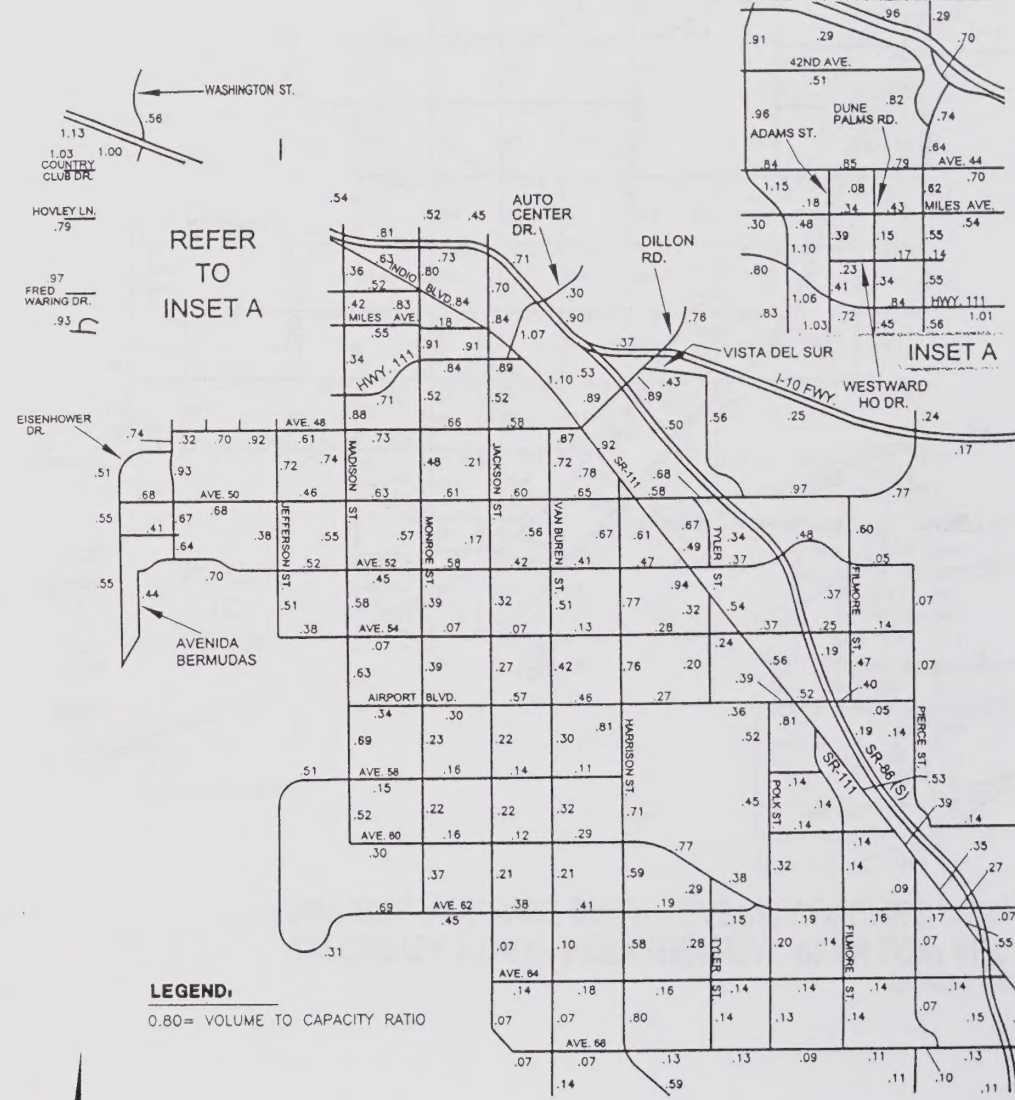
LA QUINTA STUDY AREA GENERAL PLAN RECOMMENDED ALT. POST 2020 VOLUME-TO-CAPACITY RATIOS



RKJK
& ASSOCIATES INC.

EXHIBIT 4-F

LA QUINTA STUDY AREA EXISTING GENERAL PLAN ALT. POST 2020 VOLUME-TO-CAPACITY RATIOS



RKJK
& ASSOCIATES INC.

EXHIBIT 4-G
LA QUINTA STUDY AREA GENERAL PLAN HIGH ALT.
POST 2020 VOLUME-TO-CAPACITY RATIOS

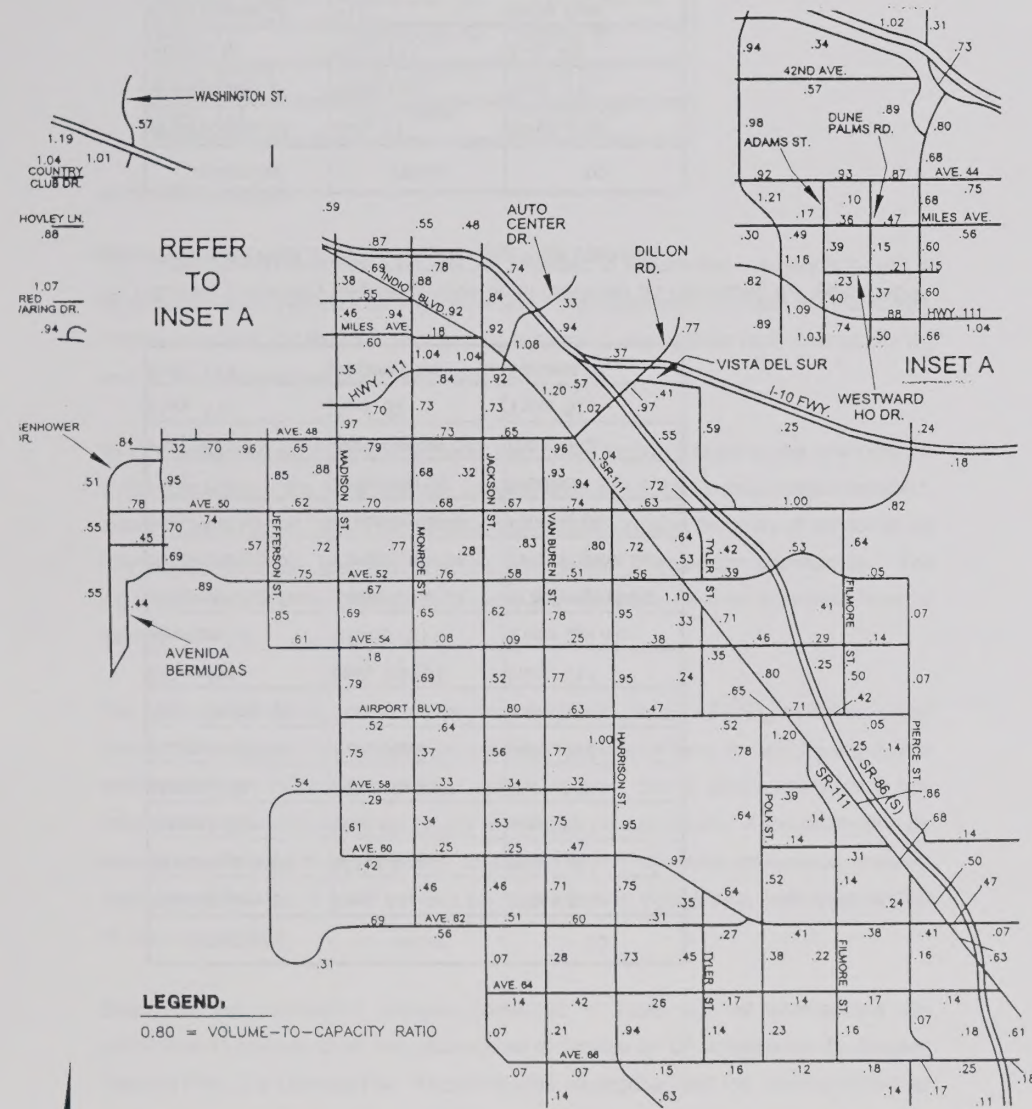
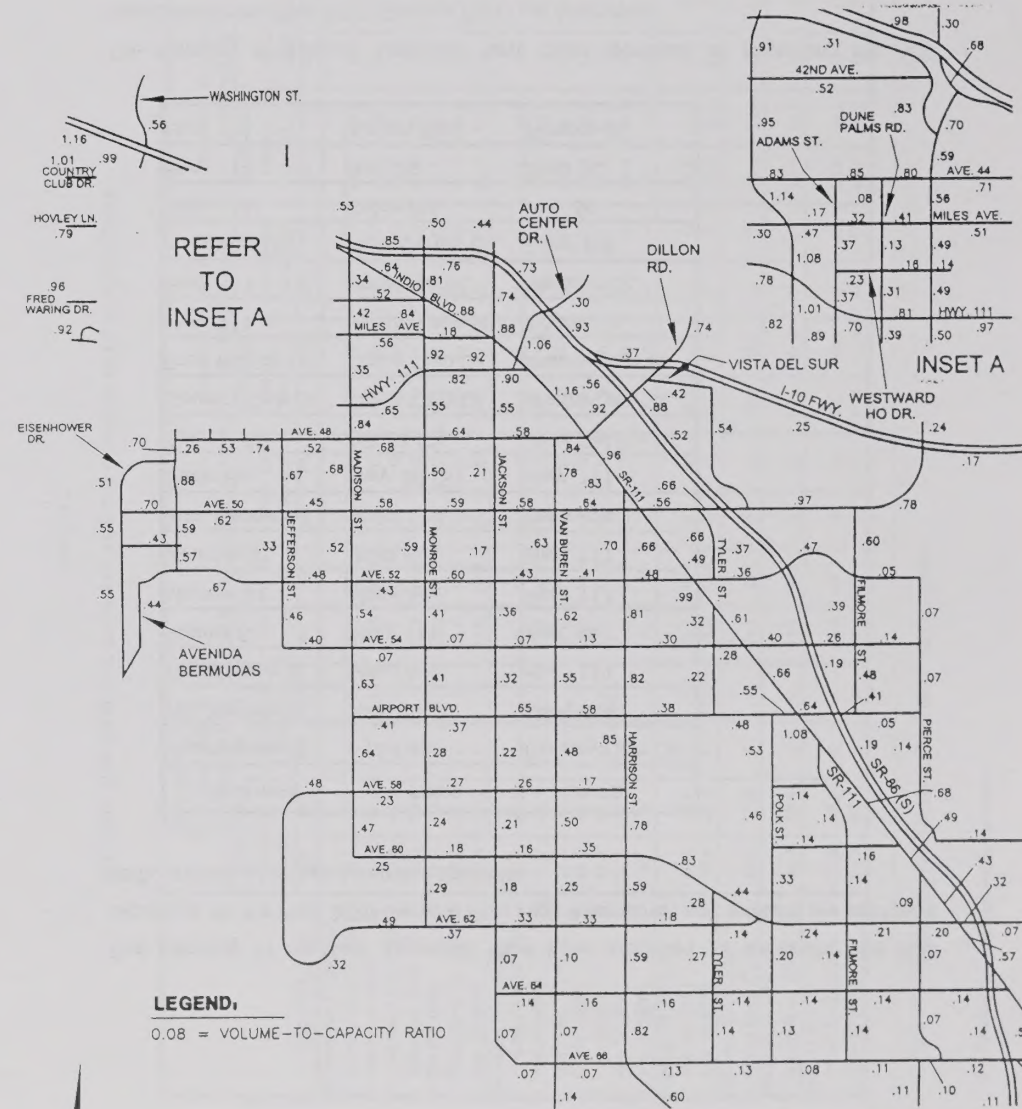


EXHIBIT 4-H
LA QUINTA STUDY AREA GENERAL PLAN LOW ALT.
POST 2020 VOLUME-TO-CAPACITY RATIOS



ROADWAY	FROM	TO
Washington St.	Ave. 44	Miles Ave.
Washington St.	Miles Ave.	Hwy. 111
Adams St.	Hwy. 111	Ave. 48
Monroe St.	Miles Ave.	Hwy. 111
Jackson St.	Indio Ave.	Hwy. 111
Auto Center Dr.	I-10	Indio Ave.
Dillon Rd.	Hwy. 86 (S)	Hwy. 111
Avenue 50	SR-86 (S)	Vista Del Sur
Country Club Dr.	Oasis Club Dr.	Washington St.
Fred Waring Dr.	Oasis Club Dr.	Washington St.
Hwy. 111	Washington St.	Adams St.
Hwy. 111	Jefferson St.	Madison St.
Hwy. 86/111	Auto Center Dr.	Dillon Rd.
Hwy. 111	Ave. 52	Tyler St.
Hwy. 111	Airport Blvd.	Filmore St.

The following 9 roadway segments have been identified as exceeding the typical ADT capacities for the Post 2020 Existing General Plan scenario:

ROADWAY	FROM	TO
Washington St.	Ave. 44	Miles Ave.
Washington St.	Miles Ave.	Hwy. 111
Adams St.	Hwy. 111	Ave. 48
Auto Center Dr.	I-10	Indio Ave.
Avenue 50	SR-86 (S)	Vista Del Sur
Country Club Dr.	Oasis Club Dr.	Washington St.
Hwy. 111	Washington St.	Adams St.
Hwy. 111	Jefferson St.	Madison St.
Hwy. 86/111	Auto Center Dr.	Dillon Rd.

The following 17 roadway segments have been identified as exceeding the ADT capacities for the Post 2020 General Plan High Alternative, and indicate the excessive traffic impacts associated with this scenario:

ROADWAY	FROM	TO
Washington St.	I-10 Fwy.	Country Club Dr.
Washington St.	Ave. 44	Miles Ave.
Washington St.	Miles Ave.	Hwy. 111
Adams St.	Hwy. 111	Ave. 48
Monroe St.	Miles Ave.	Hwy. 111
Jackson St.	Indio Ave.	Hwy. 111
Auto Center Dr.	I-10	Indio Ave.
Dillon Rd.	Hwy. 86 (S)	Hwy. 111
Avenue 50	SR-86 (S)	Vista Del Sur
Country Club Dr.	Oasis Club Dr.	Washington St.
Fred Waring Dr.	Oasis Club Dr.	Washington St.
Hwy. 111	Washington St.	Adams St.
Hwy. 111	Jefferson St.	Madison St.
Hwy. 86/111	Auto Center Dr.	Dillon Rd.
Hwy. 111	Dillon Rd.	Ave. 50
Hwy. 111	Ave. 52	Tyler St.
Hwy. 111	Airport Blvd.	Filmore St.

The following 8 roadway segments have been identified as exceeding the ADT capacities for the Post 2020 General Plan Low Alternative:

ROADWAY	FROM	TO
Washington St.	Ave. 44	Miles Ave.
Washington St.	Miles Ave.	Hwy. 111
Auto Center Dr.	I-10	Indio Ave.

Avenue 50	SR-86 (S)	Vista Del Sur
Country Club Dr.	Oasis Club Dr.	Washington St.
Hwy. 111	Washington St.	Adams St.
Hwy. 86/111	Auto Center Dr.	Dillon Rd.
Hwy. 111	Airport Blvd.	Filmore St.

Intersection Analysis

The future turning movement forecasts are reviewed to ensure that reasonable growth is projected for each individual turning movement. The relationship between the future ADT volume forecasts and the peak hour turning movement forecasts on each intersection leg and for each intersection is also evaluated.

As discussed in Section 2.0 of this report, the current technical guide to the evaluation of traffic operations is the 1997 Highway Capacity Manual (HCM) (Transportation Research Board Special Report 209). The HCM methodology expresses the level of service at an intersection in terms of delay time for the various intersection approaches. For signalized intersections, average total delay per vehicle is used to determine level of service.

The LOS analysis for signalized intersections has been performed using optimized signal timing. This analysis has included an assumed lost time of three seconds per phase in accordance with HCM recommended default values. Signal timing optimization has considered pedestrian safety and signal coordination requirements. Appropriate time for pedestrian crossings have also been considered in the signalized intersection analysis. Saturation flow rates of 1,900 vehicles per hour of green (vphg) have been assumed for all capacity analysis.

Based on the intersection analysis presented in Table 4-2, all intersections are anticipated to operate at an acceptable level of service of "D" or better for the Existing General Plan, the General Plan Recommended Alternative, and the General Plan Low

TABLE 4-2
INTERSECTION ANALYSIS SUMMARY FOR THE GENERAL PLAN ALTERNATIVES

INTERSECTION	GENERAL PLAN RECOMMENDED ALTERNATIVE						EXISTING GENERAL PLAN						GENERAL PLAN HIGH ALTERNATIVE						GENERAL PLAN LOW ALTERNATIVE					
	AVERAGE DELAY ¹ (SECS)			LEVEL OF SERVICE			AVERAGE DELAY ¹ (SECS)			LEVEL OF SERVICE			AVERAGE DELAY ¹ (SECS)			LEVEL OF SERVICE			AVERAGE DELAY ¹ (SECS)			LEVEL OF SERVICE		
	AM	PM		AM	PM		AM	PM		AM	PM		AM	PM		AM	PM		AM	PM		AM	PM	
Washington St. (NS) at: • Country Club Dr. (EW) • Hovley Ln. (EW) • Fred Waring Dr. (EW) • Miles Ave. (EW) • SR-111 (EW) • Eisenhower Dr. (EW) • Ave. 50 (EW)	48.7	49.4		D	D		50.2	48.4		D	D		54.6	48.1		D	D		47.2	49.9		D	D	
Jefferson St. (NS) at: • Country Club Dr. (EW) • Ave. 44 (EW) • Miles Ave. (EW) • SR-111 (EW) • Ave. 48 (EW) • Ave. 50 (EW) • Ave. 52 (EW)	30.6	45.7		D	D		47.7	44.1		D	D		43.1	56.4		D	D		36.3	49.1		D	D	
Madison St. (NS) at: • Ave. 50 (EW) • Ave. 52 (EW)	40.1	49.8		D	D		50.1	46.4		D	D		46.6	40.1		D	D		34.5	45.5		D	D	
Jackson St. (NS) at: • Airport Blvd. (EW) • Harrison St. (NS) at: • Airport Blvd. (EW)	46.6	50.9		D	D		45.7	53.5		D	D		32.9	52.0		D	D		38.9	55.0		D	D	
SR-111 (NS) at: • Airport Blvd. (EW) • Ave. 62 (EW)	45.9	49.0		D	D		43.1	44.7		D	D		50.2	56.0		D	D		53.8	52.6		D	D	
	50.3	46.4		D	D		45.4	53.3		D	D		44.3	47.6		D	D		42.7	50.2		D	D	

Alternatives. However, the following three intersections are anticipated to operate at LOS "E" during the PM peak hour for the General Plan High Alternative:

Washington St. (NS) at:

- Hovley Ln. (EW)

Jefferson St. (NS) at:

- Country Club Dr. (EW)

SR-111 (NS) at:

- Airport Blvd. (EW)

Tables 4-3 through 4-6 present the level of service for the twenty study area intersections with the assumed intersection geometry for all four alternatives. Exhibit 4-I illustrates the intersection geometry identified in Tables 4-3 through 4-6.

Appendices "D" through "E" contain the intersection capacity worksheets for all Post-2020 General Plan Alternatives.

A roundabout intersection design is proposed at the intersection of Jefferson Street and Avenue 52. Exhibit 4-J illustrates the conceptual design of the proposed roundabout. Roundabout geometry at the intersection can be favorable over conventional intersection geometry for the following reasons:

- (1) Avoidance of traffic signal installation and maintenance costs
- (2) Avoidance of "unnecessary" stop delays
- (3) One direction of opposing traffic
- (4) Decreased vehicle travel speed
- (5) Less severity of accidents

TABLE 4-3

INTERSECTION ANALYSIS FOR THE GENERAL PLAN RECOMMENDED ALTERNATIVE

INTERSECTION	TRAFFIC CONTROL ³	INTERSECTION APPROACH LANES ¹												AVERAGE DELAY ² (SECS.)		LEVEL OF SERVICE	
		NORTH-BOUND			SOUTH-BOUND			EAST-BOUND			WEST-BOUND			AM	PM	AM	PM
		L	T	R	L	T	R	L	T	R	L	T	R				
Washington St. (NS) at: • Country Club Dr. (EW)	TS	1	4	0	1	4	1 >	2	2	0	1	2	0	48.7	49.4	D	D
• Hovley Ln. (EW)	TS	1	3	0	1	3	0	1	2	0	1	2	0	34.9	51.2	C	D
• Fred Waring Dr. (EW)	TS	2	3	0	1	3	1	1	3	1 >>	1	3	0	49.5	46.8	D	D
• Miles Ave. (EW)	TS	2	3	0	2	3	0	1	2	0	1	2	0	45.2	50.7	D	D
• SR-111 (EW)	TS	2	4	0	2	4	0	1	4	1 >	1	3	1 >	41.3	48.6	D	D
• Eisenhower Dr. (EW)	TS	1	4	0	1	3	1 >	2	2	0	0	1	0	49.6	51.0	D	D
• Ave. 50 (EW)	TS	1	3	1	2	3	1 >	1	2	1	1	2	1 >	42.4	47.3	D	D
Jefferson St. (NS) at: • Country Club Dr. (EW)	TS	2	3	0	1	2	1 >>	2	1	1	1	1	0	50.5	45.7	D	D
• Ave. 44 (EW)	TS	1	3	0	1	3	0	1	2	1	1	2	1	30.6	49.5	C	D
• Miles Ave. (EW)	TS	1	3	0	1	3	0	1	1	1	1	1	1 >>	27.2	43.7	C	D
• SR-111 (EW)	TS	2	3	1	2	3	1	2	3	1	2	3	1	28.3	36.2	C	D
• Ave. 48 (EW)	TS	2	3	0	1	3	0	1	2	1	2	2	0	46.7	44.1	D	D
• Ave. 50 (EW)	TS	2	3	1	2	3	1 >	1.5	1.5	1	1.5	1.5	1	30.5	42.7	C	D
• Ave. 52 (EW)	R																
Madison St. (NS) at: • Ave. 50 (EW)	TS	1	2	0	1	2	0	1	2	0	1	2	0	40.1	49.8	D	D
• Ave. 52 (EW)	TS	1	2	0	1	2	0	1	2	0	1	2	0	38.5	45.2	D	D
Jackson St. (NS) at: • Airport Blvd. (EW)	TS	1	2	0	1	2	0	1	2	0	1	2	0	46.6	50.9	D	D
Harrison St. (NS) at: • Airport Blvd. (EW)	TS	1	3	0	1	3	0	1	2	0	1	2	0	39.8	38.6	D	D
SR-111 (NS) at: • Airport Blvd. (EW)	TS	2	2	0	1	2	0	1	3	1	2	3	0	45.9	49.0	D	D
• Ave. 62 (EW)	TS	1	2	0	1	2	0	1	2	0	1	2	0	50.3	46.4	D	D

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When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right Turn Overlap; >> = Free Right Turn

² Source: Dowling Associates, Traffix Version 7.1.0607 (1999).

³ TS = Traffic Signal, R = Roundabout

TABLE 4-4

INTERSECTION ANALYSIS FOR THE EXISTING GENERAL PLAN

INTERSECTION	TRAFFIC CONTROL ³	INTERSECTION APPROACH LANES ¹								AVERAGE DELAY ² (SECS.)		LEVEL OF SERVICE											
		NORTH-BOUND			SOUTH-BOUND			EAST-BOUND			WEST-BOUND			AM		PM		AM		PM			
		L	T	R	L	T	R	L	T	R	L	T	R										
Washington St. (NS) at:																							
• Country Club Dr. (EW)	TS	1	4	0	1	4	1 >	2	2	0	1	2	0	50.2	48.4	D	D						
• Hovley Ln (EW)	TS	1	3	0	1	3	0	1	2	0	1	2	0	33.5	45.7	C	D						
• Fred Waring Dr. (EW)	TS	2	3	0	1	3	1	1	3	1 >>	1	3	0	43.9	46.5	D	D						
• Miles Ave. (EW)	TS	2	3	0	2	3	0	1	2	0	1	2	0	40.3	47.6	D	D						
• SR-111 (EW)	TS	2	4	0	2	4	0	1	4	1 >	1	3	1 >	54.0	41.7	D	D						
• Eisenhower Dr. (EW)	TS	1	4	0	1	3	1 >	2	2	0	0	1	0	41.6	36.7	D	D						
• Ave. 50 (EW)	TS	1	3	1	2	3	1 >	1	2	1	1	2	1 >	37.6	52.8	D	D						
Jefferson St. (NS) at:																							
• Country Club Dr. (EW)	TS	2	3	0	1	2	1 >>	2	1	1	1	1	0	47.7	44.1	D	D						
• Ave. 44 (EW)	TS	1	3	0	1	3	0	1	2	1	1	2	1	28.3	49.9	C	D						
• Miles Ave. (EW)	TS	1	3	0	1	3	0	1	1	1	1	1	1 >>	26.7	43.1	C	D						
• SR-111 (EW)	TS	2	3	1	2	3	1	2	3	1	2	3	1	29.5	36.5	C	D						
• Ave. 48 (EW)	TS	2	3	0	1	3	0	1	2	1	2	2	0	51.6	35.4	D	D						
• Ave. 50 (EW)	TS	2	3	1	2	3	1 >	1.5	1.5	1	1.5	1.5	1	29.8	31.7	C	C						
• Ave. 52 (EW)	R																						
Madison St. (NS) at:																							
• Ave. 50 (EW)	TS	1	2	0	1	2	0	1	2	0	1	2	0	50.1	46.4	D	D						
• Ave. 52 (EW)	TS	1	2	0	1	2	0	1	2	0	1	2	0	25.8	28.8	C	C						
Jackson St. (NS) at:																							
• Airport Blvd. (EW)	TS	1	2	0	1	2	0	1	2	0	1	2	0	45.7	53.5	D	D						
Harrison St. (NS) at:																							
• Airport Blvd. (EW)	TS	1	3	0	1	3	0	1	2	0	1	2	0	27.7	39.6	C	D						
SR-111 at:																							
• Airport Blvd. (EW)	TS	2	2	0	1	2	0	1	3	1	2	3	0	43.1	44.7	D	D						
• Ave. 62 (EW)	TS	1	2	0	1	2	0	1	2	0	1	2	0	45.4	53.3	D	D						

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¹ When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right Turn Overlap; >> = Free Right Turn

² Source: Dowling Associates, Traffix Version 7.1.0607 (1999).

³ TS = Traffic Signal, R = Roundabout

TABLE 4-5

INTERSECTION ANALYSIS FOR THE GENERAL PLAN HIGH ALTERNATIVE

INTERSECTION	TRAFFIC CONTROL ³	INTERSECTION APPROACH LANES ¹								AVERAGE DELAY ² (SECS.)		LEVEL OF SERVICE			
		NORTH-BOUND			SOUTH-BOUND			EAST-BOUND						WEST-BOUND	
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM
Washington St. (NS) at: • Country Club Dr. (EW) • Hovley Ln. (EW) • Fred Waring Dr. (EW) • Miles Ave. (EW) • SR-111 (EW) • Eisenhower Dr. (EW) • Ave. 50 (EW)	TS TS TS TS TS TS TS	1 4 0 1 3 0 2 3 0 2 3 0 2 4 0 1 4 0 1 3 1	1 4 1 > 1 3 0 1 3 1 2 3 0 2 4 0 1 3 1 > 2 3 1 >	2 2 0 1 2 0 1 3 1 >> 1 2 0 1 4 1 > 2 2 0 1 2 1	1 2 0 1 2 0 1 3 1 1 2 0 1 3 1 > 0 1 0 1 2 1 >	54.6 38.9 41.5 38.0 44.5 43.6 40.0	48.1 55.8 52.9 51.0 45.3 49.9 48.2	D D D D D D D	D E D D D D D						
Jefferson St. (NS) at: • Country Club Dr. (EW) • Ave. 44 (EW) • Miles Ave. (EW) • SR-111 (EW) • Ave. 48 (EW) • Ave. 50 (EW) • Ave. 52 (EW)	TS TS TS TS TS TS R	2 3 0 1 3 0 1 3 0 2 3 1 2 3 0 2 3 1 2 3 1	1 2 1 >> 1 3 0 1 3 0 2 3 1 1 3 0 2 3 1 > 2 3 1 >	2 1 1 1 2 1 1 1 1 2 3 1 1 2 1 1.5 1.5 1	1 1 0 1 2 1 1 1 1 >> 2 3 1 2 2 0 1.5 1.5 1	43.1 34.7 27.0 29.7 40.2 31.5	56.4 49.0 47.9 40.7 39.7 36.0	D C C C D C	E D D D D D						
Madison St. (NS) at: • Ave. 50 (EW) • Ave. 52 (EW)	TS TS	1 2 0 1 2 0	1 2 0 1 2 0	1 2 0 1 2 0	1 2 0 1 2 0	46.6 32.6	40.1 47.1	D C	D D						
Jackson St. (NS) at: • Airport Blvd. (EW)	TS	1 2 0	1 2 0	1 2 0	1 2 0	32.9	52.0	C	D						
Harrison St. (NS) at: • Airport Blvd. (EW)	TS	1 3 0	1 3 0	1 2 0	1 2 0	46.6	38.0	D	D						
SR-111 (NS) at: • Airport Blvd. (EW) • Ave. 62 (EW)	TS TS	2 2 0 1 2 0	1 2 0 1 2 0	1 3 1 1 2 0	2 3 0 1 2 0	50.2 44.3	56.0 47.6	D D	E D						

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¹ When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right Turn Overlap; >> = Free Right Turn

² Source: Dowling Associates, Traffix Version 7.1.0607 (1999).

³ TS = Traffic Signal, R = Roundabout

TABLE 4-6

INTERSECTION ANALYSIS FOR THE GENERAL PLAN LOW ALTERNATIVE

INTERSECTION	TRAFFIC CONTROL ³	INTERSECTION APPROACH LANES ¹								AVERAGE DELAY ² (SECS.)		LEVEL OF SERVICE						
		NORTH-BOUND			SOUTH-BOUND			EAST-BOUND			WEST-BOUND			AM	PM	AM	PM	
		L	T	R	L	T	R	L	T	R	L	T	R					
Washington St. (NS) at:																		
• Country Club Dr. (EW)	TS	1	4	0	1	4	1 >	2	2	0	1	2	0	47.2	49.9	D	D	
• Hovley Ln. (EW)	TS	1	3	0	1	3	0	1	2	0	1	2	0	46.5	45.7	D	D	
• Fred Waring Dr. (EW)	TS	2	3	0	1	3	1	1	3	1 >>	1	3	0	41.8	45.3	D	D	
• Miles Ave. (EW)	TS	2	3	0	2	3	0	1	2	0	1	2	0	43.6	46.7	D	D	
• SR-111 (EW)	TS	2	4	0	2	4	0	1	4	1 >	1	3	1 >	47.7	45.7	D	D	
• Eisenhower Dr. (EW)	TS	1	4	0	1	3	1 >	2	2	0	0	1	0	42.2	47.0	D	D	
• Ave. 50 (EW)	TS	1	3	1	2	3	1 >	1	2	1	1	2	1 >	39.4	51.1	D	D	
Jefferson St. (NS) at:																		
• Country Club Dr. (EW)	TS	2	3	0	1	2	1 >>	2	1	1	1	1	0	36.3	49.1	D	D	
• Ave. 44 (EW)	TS	1	3	0	1	3	0	1	2	1	1	2	1	32.4	43.9	C	D	
• Miles Ave. (EW)	TS	1	3	0	1	3	0	1	1	1	1	1	1 >>	25.8	38.9	C	D	
• SR-111 (EW)	TS	2	3	1	2	3	1	2	3	1	2	3	1	28.0	32.0	C	C	
• Ave. 48 (EW)	TS	2	3	0	1	3	0	1	2	1	2	2	0	44.4	32.2	D	C	
• Ave. 50 (EW)	TS	2	3	1	2	3	1 >	1.5	1.5	1	1.5	1.5	1	29.9	31.0	C	C	
• Ave. 52 (EW)	R																	
Madison St. (NS) at:																		
• Ave. 50 (EW)	TS	1	2	0	1	2	0	1	2	0	1	2	0	34.5	45.5	C	D	
• Ave. 52 (EW)	TS	1	2	0	1	2	0	1	2	0	1	2	0	25.3	29.5	C	C	
Jackson St. (NS) at:																		
• Airport Blvd. (EW)	TS	1	2	0	1	2	0	1	2	0	1	2	0	38.9	55.0	D	D	
Harrison St. (NS) at:																		
• Airport Blvd. (EW)	TS	1	3	0	1	3	0	1	2	0	1	2	0	33.1	40.4	C	D	
SR-111 (NS) at:																		
• Airport Blvd. (EW)	TS	2	2	0	1	2	0	1	3	1	2	3	0	53.8	52.6	D	D	
• Ave. 62 (EW)	TS	1	2	0	1	2	0	1	2	0	1	2	0	42.7	50.2	D	D	

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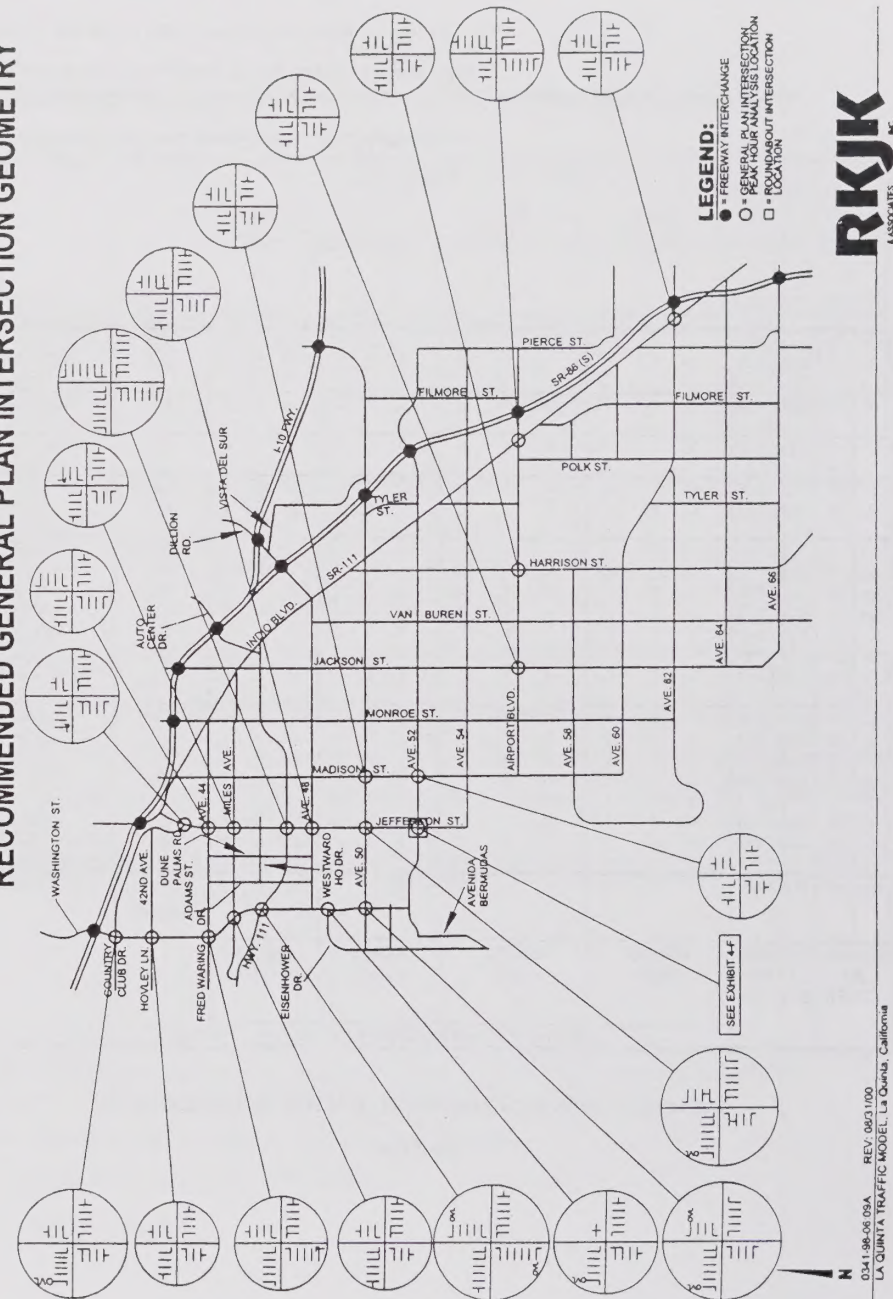
¹ When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right Turn Overlap; >> = Free Right Turn

² Source: Dowling Associates, Traffix Version 7.1.0607 (1999).

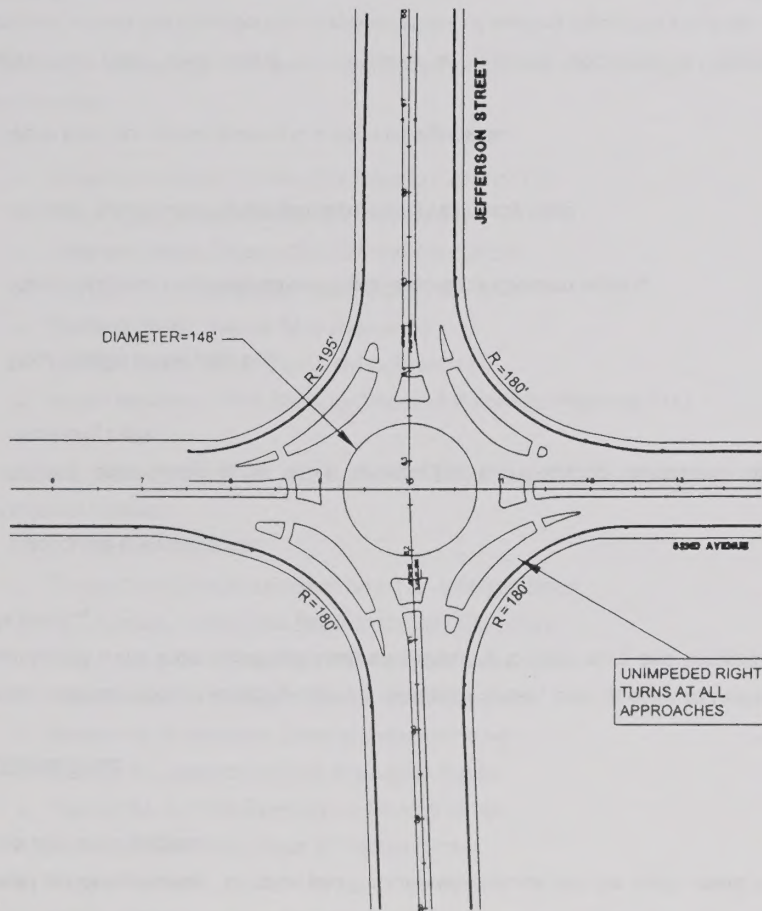
³ TS = Traffic Signal, R = Roundabout

EXHIBIT 4-1
LA QUINTA STUDY AREA
RECOMMENDED GENERAL PLAN INTERSECTION GEOMETRY



RKJK
ASSOCIATES

EXHIBIT 4-J
**PROPOSED ROUNDABOUT DESIGN
 FOR THE JEFFERSON STREET/52ND AVE. INTERSECTION**



SOURCE: RBF CONSULTING

By constructing a modern roundabout at this location, there is no need for the installation of a traffic signal. The roundabout would save money in the absence of traffic signal installation and the annual maintenance/ operational cost.

A roundabout would avoid "unnecessary" stop delays because the traffic entering a roundabout would slow down to yield to opposing traffic rather than making complete stops at a red light. Since vehicles slow down toward a roundabout, the vehicle speeds would tend to be slower in comparison to a conventional intersection.

There are several safety benefits toward a roundabout. The first is that motorists, bicycles and pedestrians are required to check for traffic from only one direction at a time, thereby simplifying the task. Second, the accidents in roundabout tend to be less severe when comparing to accidents in conventional intersections because vehicle speeds are generally lower.

Roundabout Entry Design

In modern roundabouts, the yield line is the right edgeline for circulating traffic, and it is painted at an angle to entering traffic. The pedestrian crossing area is one to three car lengths upstream of the yield line, where the crossing is narrower and drivers leaving the roundabout are not distracted by vehicle-vehicle interactions.

The design of roundabout entries is a complex procedure. There are several variables which need to be addressed to ensure a design which is safe and which has adequate capacity. The variables consist of: entry width, flare length, entry angle, entry radius, and approach road half-width.

The relationship between entry and capacity is quite significant. Entry width and flare length are the largest factors which affect capacity. In cases associated with low predicted flows, increased entry width is not operationally necessary. Care must be taken in the choice of entry angle, however, because high and low angles may result in

increased accident potential. Ourston and Doctors recommend that the angle should lie between 20 and 60 degrees.

Roundabout Safety

The most common problem affecting safety is excessive speed, both at entry and within the roundabout. The most significant factors contributing to high entry and circulating speeds are:

- (1) Inadequate entry deflection.
- (2) A very acute entry angle which encourages fast merging maneuvers with circulating traffic.
- (3) Poor visibility to the yield line.
- (4) Poorly designed or positioned warning and advance direction signing.
- (5) Advisory speed signs, where provided, being incorrectly sited.
- (6) More than four entries leading to a large configuration.

Measures that have been found to be useful in reducing accidents at existing roundabouts include the repositioning or reinforcement of warning signs; the provision of map-type advance directional signs; making the yield line more conspicuous; moving the central island chevron sign further to the right to emphasize the angle of turn; placing another chevron sign above the normal position; and placing chevron signs in the median in line with the left lane approach on divided roads.

Drivers of all vehicles approaching the yield line at the roundabout are recommended to be able to see the full width of the circulatory roadway ahead of them for a distance of at least 164 feet, measured along the centerline of the circulatory roadway. This accommodates a stopping sight distance which corresponds to a design speed that is slightly above 25 miles per hour (Highway Design Manual Table 201.1).

Roundabout Pedestrian and Bicycle Facilities

Designers are encouraged to consider the provision of facilities which take bicyclists out of the circulatory roadway at roundabouts by application of techniques which include shared use by pedestrians and bicyclists of a peripheral bikeway-walkway.

Separate pedestrian routes with crossings away from the flared entries to roundabouts are also preferable. Here the roadway widths are less, and vehicular traffic movements are more straightforward.

Roundabout Landscaping

Apart from aesthetics, the landscape treatment of roundabouts can have practical advantages from a traffic engineering point of view. By shaping the earth, in conjunction with planting, the presence of the roundabout can be made more obvious to approaching traffic. Planting should not compromise visibility or safety, and the design should consider maintenance implications.

Circulation System Requirements

Based upon existing and projected traffic demands generated by buildout of the General Plan, each major roadway has been assigned a specific design classification as shown on Exhibit 4-K. The need for and appropriateness of each classification has been based upon modeled future traffic volumes and overall community design goals set forth in the

LA QUINTA STUDY AREA ROADWAY CLASSIFICATION AND GENERAL PLAN NUMBER OF LANES

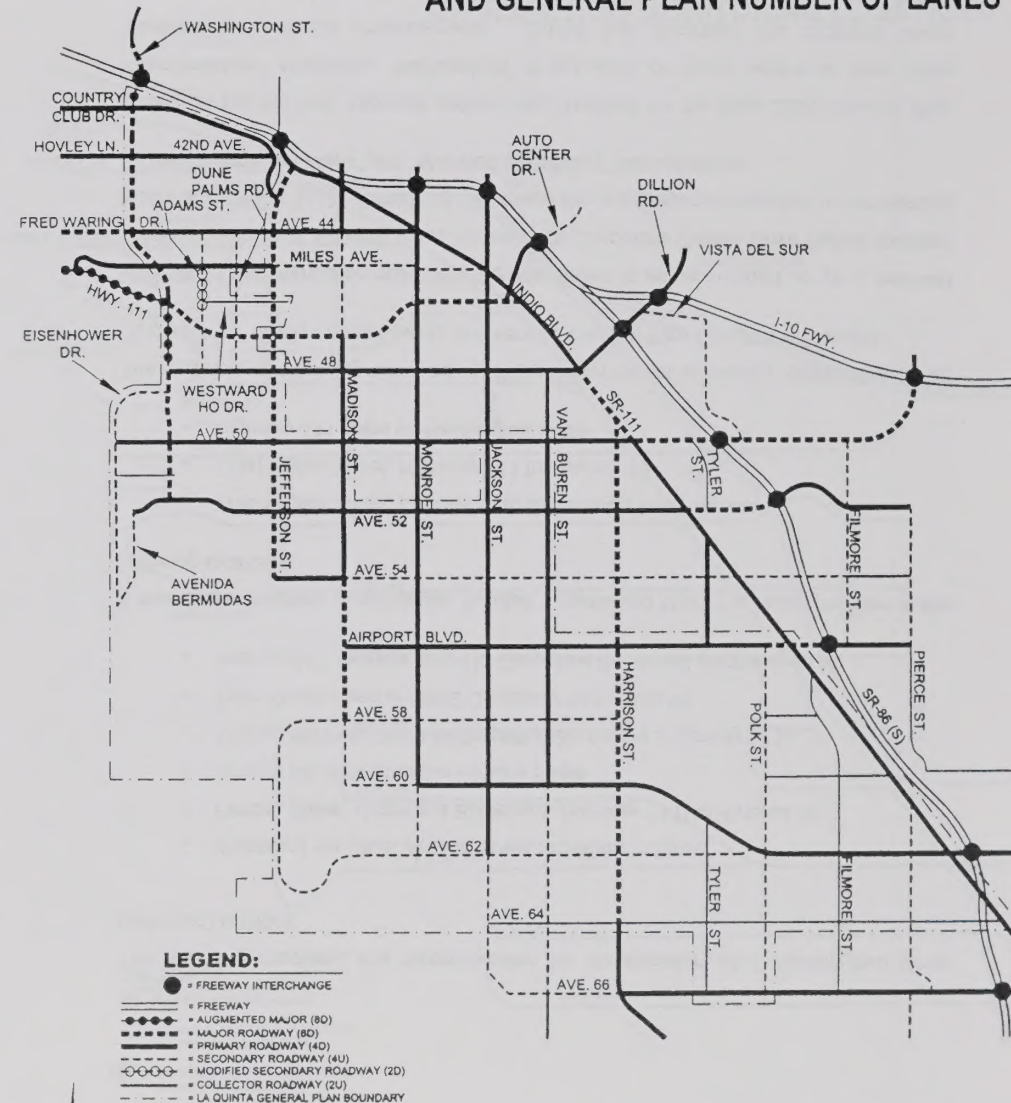
General Plan. The geometry assumed at the study area intersections can be accommodated based on the recommended roadway classifications illustrated on Exhibit 4-K.

The following roadway segments are recommended for classification as Major (six lanes divided) facilities:

- Washington Street, County Club Drive to Highway 111
- Washington Street, Avenue 48 to Avenue 52
- Jefferson Street, Country Club Drive to Avenue 54
- Highway 111, Washington Street to Jefferson Street
- Madison Street, Avenue 54 to Avenue 58
- Harrison Street, Airport Boulevard to Avenue 64
- Airport Boulevard, Polk Street to Grapefruit Boulevard (Highway 111)

The following roadway segments are recommended for classification as Primary (four lanes divided) facilities:

- County Club Drive, Washington Street to Jefferson Street
- 42nd Avenue, Washington Street to Country Club Drive
- Fred Waring Drive, Washington Drive to Jefferson Street
- Miles Avenue, Washington Street to Jefferson Street
- Avenue 48, Washington Street to Jefferson Street
- Avenue 50, Eisenhower Drive to Madison Street
- Avenue 52, Avenida Bermudas to Monroe Street
- Avenue 54, Jefferson Street to Madison Street
- Airport Boulevard, Madison Street to Polk Street
- Madison Street, Avenue 50 to Avenue 54
- Monroe Street, Avenue 52 to Avenue 60



- Jackson Street, Airport Boulevard to Avenue 60
- Van Buren Street, Airport Boulevard to Avenue 60
- Avenue 60, Monroe Street to Harrison Street
- Avenue 60/62 Crossover, Harrison Street to Polk Street
- Avenue 62, Polk Street to Grapefruit Boulevard
- Avenue 66, Tyler Street to Polk Street
- Grapefruit Boulevard (SR-111), Airport Boulevard to Avenue 64

The following roadways are recommended for classifications a Secondary (four lanes undivided) facilities:

- Adams Street, Fred Waring Drive to Avenue 48
- Dune Palms Road, Fred Waring Drive to Avenue 48
- Avenue 54, Madison Street to Monroe Street
- Eisenhower Drive west of Washington Street
- Avenida Bermudas south of Avenue 52
- Avenue 58, Madison Street to Harrison Street
- Polk Street, Airport Boulevard to Avenue 66
- Madison Street, Avenue 58 to Avenue 60
- Avenue 60, Madison Street to Monroe Street
- Monroe Street, Avenue 60 to Avenue 62
- Avenue 58/62 Loop, Madison Street to Monroe Street
- Avenue 62, Monroe Street to Avenue 60/62 Crossover
- Jackson Street, Avenue 60 to Avenue 64
- Pierce Street, Grapefruit Boulevard (Highway 111) to Avenue 64

The following roadways are recommended for classification as Collector (two lanes undivided) facilities:

- Westward Ho Drive, Adams Street to Jefferson Street
- Filmore Street, Grapefruit Boulevard (Highway 111) to Avenue 64
- Avenue 58, Polk Street to Filmore Street
- Avenue 60, Polk Street to Grapefruit Boulevard (Highway 111)
- Tyler Street, Avenue 60/62 Crossover to Avenue 66
- Avenue 64, Jackson Street to Grapefruit Boulevard (Highway 111)

A new 8-lane roadway classification, labeled "Augmented Major", is recommended at the following locations:

- Washington Street, Country Club Drive to the I-10 Freeway
- Washington Street, Highway 111 to Avenue 48
- Highway 111, west of Washington Street

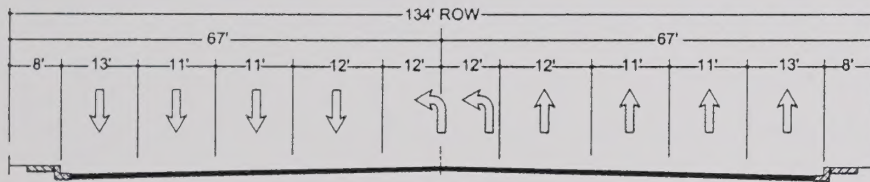
The segment of Highway 111 west of Washington Street is already designated as an "Expressway" facility on the County of Riverside General Plan Circulation Element.

In order to accommodate golf carts, Adams Street is recommended to be a modified secondary roadway between Miles Avenue and Corporate Centre Drive (future roadway North of Highway 111). Exhibit 4-L illustrates the roadway cross-section recommended for the "Augmented Major" and "Modified Secondary" classifications.

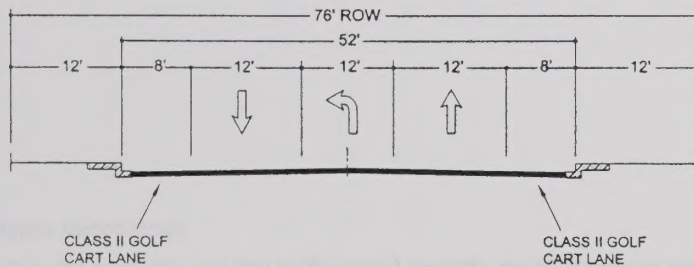
Based on the roadway segment deficiencies identified for the Post 2020 General Plan Recommended Alternative, intersections at the ends of these segments have been identified for potential enhancements. Exhibit 4-M illustrates the locations where enhancements could be implemented such as dual left turn lanes, right turn lanes, right turn channelization, and signal phasing improvements.

EXHIBIT 4-L AUGMENTED CROSS-SECTIONS

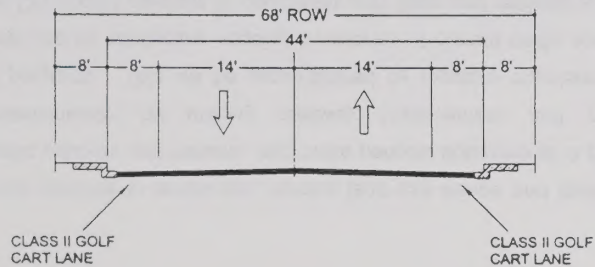
AUGMENTED MAJOR CROSS-SECTION



MODIFIED SECONDARY CROSS-SECTION AT INTERSECTIONS

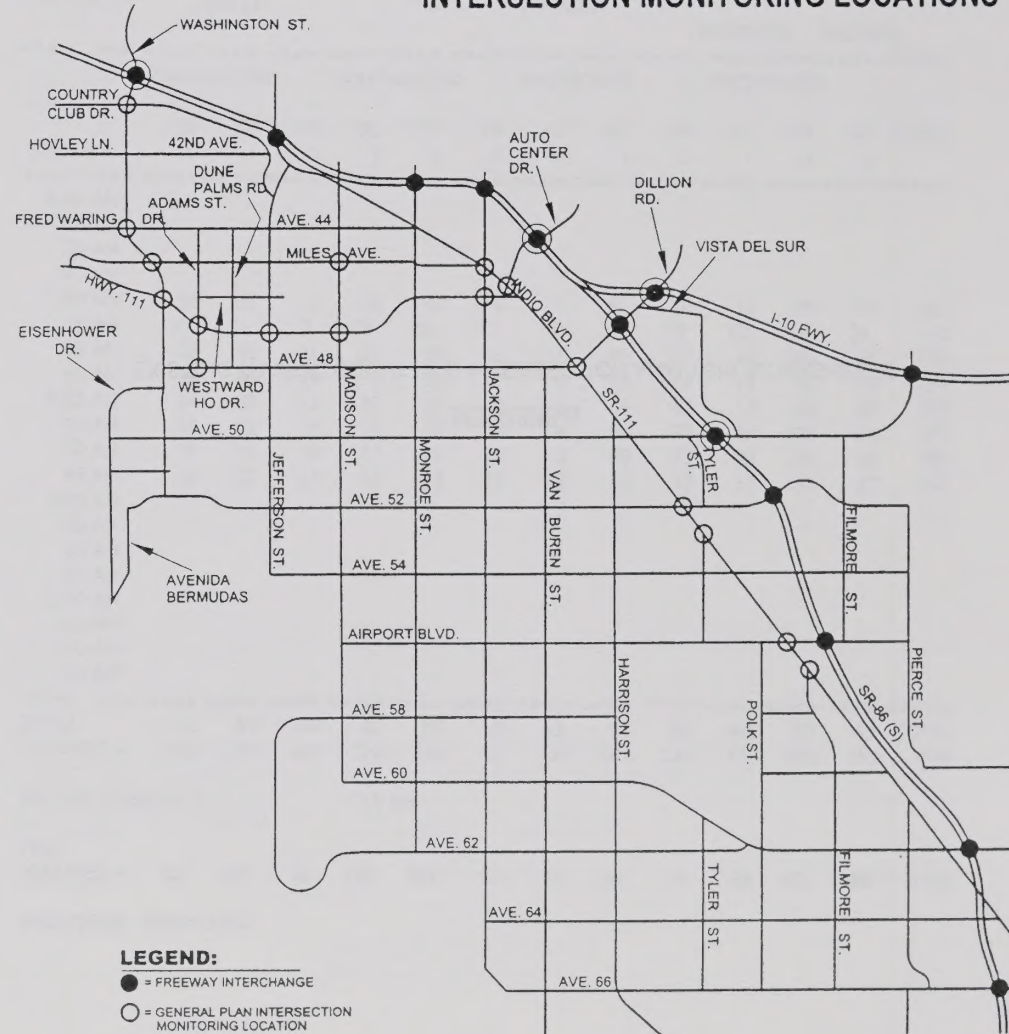


MODIFIED SECONDARY CROSS-SECTION BETWEEN INTERSECTIONS
(SUBJECT TO LANE TRANSITION REQUIREMENTS)



NOTE: ROADWAY CROSS-SECTION MAY VARY BASED UPON THE FEASIBILITY OF IMPROVEMENTS AND LINK/INTERSECTION VOLUME PROJECTIONS

EXHIBIT 4-M LA QUINTA STUDY AREA - POST 2020 RECOMMENDED ALTERNATIVE INTERSECTION MONITORING LOCATIONS



LEGEND:

- = FREEWAY INTERCHANGE
- = GENERAL PLAN INTERSECTION MONITORING LOCATION
- = GENERAL PLAN INTERCHANGE MONITORING LOCATION



The City should continue to review and monitor land use trends and their associated changes in traffic volumes and patterns, and make periodic adjustments in planning and program implementation by utilizing roadway improvement and maintenance management programs. This will be accomplished by regularly monitoring traffic on major roadways and by conducting ongoing inventories of current traffic and circulation patterns. The City should continue to coordinate with State and regional agencies that have jurisdiction over the state highways in the community. Through the phased implementation the roadway cross-sections and the identified intersection geometries presented in this study, the City can progressively alleviate current problems and avoid future system inadequacies.

APPENDIX A

EXISTING TRAFFIC COUNT AND INTERSECTION ANALYSIS WORKSHEETS

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: JEFFERSON DATE: 6/24/99 CITY: LA QUINTA

E-W STREET: RTE 111 DAY: THURSDAY

PROJECT# 0437005A

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1	0	1	1	1	1	1	0	1	1	0	

6:00 AM													
15 AM													
30 AM													
45 AM													
7:00 AM	16	45	5	18	53	8	7	61	16	11	106	23	369
15 AM	30	41	3	23	59	12	4	73	20	10	136	22	433
30 AM	30	40	21	37	40	13	5	96	16	16	165	26	505
45 AM	23	52	14	34	56	17	4	68	18	14	90	14	404
8:00 AM	24	49	13	28	36	9	5	65	14	13	131	27	414
15 AM	17	35	18	34	30	9	6	67	22	11	106	21	376
30 AM	28	39	19	27	41	14	1	96	15	23	118	19	440
45 AM	22	35	14	18	34	15	2	75	13	11	111	17	367
9:00 AM													
15 AM													
30 AM													
45 AM													
10:00 AM													
15 AM													
30 AM													
45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	190	336	107	219	349	97	34	601	134	109	963	169	3308

AM Peak Hr Begins at 715 AM

PEAK													
VOLUMES =	107	182	51	122	191	51	18	302	68	53	522	89	1756

ADDITIONS: SIGNALIZED

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: JEFFERSON DATE: 6/24/99 CITY: LA QUINTA

E-W STREET: RTE 111 DAY: THURSDAY PROJECT# 0437005P

====
NORTHBOUND SOUTHBOUND EASTBOUND WESTBOUND
=====

LANES: NL NT NR SL ST SR EL ET ER WL WT WR TOT
1 1 0 1 1 1 1 1 0 1 1 1 0

=====
2:00 PM
15 PM
30 PM
45 PM
3:00 PM
15 PM
30 PM
45 PM
4:00 PM 20 46 16 28 39 24 7 172 11 23 157 24 5
15 PM 25 58 17 34 46 12 22 169 33 36 148 22 6
30 PM 27 48 33 30 46 17 12 177 26 15 144 17 5
45 PM 19 30 20 18 41 23 11 196 12 27 164 33 5
5:00 PM 24 42 20 26 57 17 15 170 31 19 159 27 6
15 PM 21 50 14 28 37 12 12 150 18 6 152 29 1
30 PM 20 32 12 27 43 12 7 129 20 14 128 20 1
45 PM 22 44 13 23 49 15 7 132 16 12 118 20 1
6:00 PM
15 PM
30 PM
45 PM
=====

TOTAL NL NT NR SL ST SR EL ET ER WL WT WR TO
VOLUMES = 178 350 145 214 358 132 93 1295 167 152 1170 192

PM Peak Hr Begins at 415 PM

PEAK
VOLUMES = 95 178 90 108 190 69 60 712 102 97 615 99 2

ADDITIONS: SIGNALIZED

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: JEFFERSON DATE: 6/24/99 CITY: LA QUINTA

E-W STREET: 50TH ST DAY: THURSDAY PROJECT# 0437002A

====
NORTHBOUND SOUTHBOUND EASTBOUND WESTBOUND
=====

LANES: NL NT NR SL ST SR EL ET ER WL WT WR TOTAL
0 1 0 0 1 0 0 1 0 0 1 0

=====
6:00 AM
15 AM
30 AM
45 AM
7:00 AM 7 44 2 5 63 19 11 21 7 2 32 17 230
15 AM 5 43 8 10 43 11 7 19 5 2 17 23 193
30 AM 5 51 3 6 74 28 12 23 12 0 24 25 263
45 AM 2 51 3 12 65 36 20 32 11 2 29 15 278
8:00 AM 5 49 4 11 57 19 21 20 5 1 18 14 224
15 AM 6 47 3 4 39 17 15 26 4 2 24 9 196
30 AM 8 51 2 7 38 17 15 15 6 2 15 19 195
45 AM 5 51 6 4 46 23 19 19 4 3 22 17 219
9:00 AM
15 AM
30 AM
45 AM
10:00 AM
15 AM
30 AM
45 AM
=====

TOTAL NL NT NR SL ST SR EL ET ER WL WT WR TOTAL
VOLUMES = 43 387 31 59 425 170 120 175 54 14 181 139 1791

PM Peak Hr Begins at 700 AM

PEAK
VOLUMES = 19 189 16 33 245 94 50 95 35 6 102 80 964

ADDITIONS: SIGNALIZED

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: JEFFERSON DATE: 6/24/99 CITY: LA QUINTA
E-W STREET: 50TH ST DAY: THURSDAY
PROJECT# 0437002P

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TO
	0	1	0	0	1	0	0	1	0	0	1	0	

2:00 PM													
15 PM													
30 PM													
45 PM													
3:00 PM													
15 PM													
30 PM													
45 PM													
4:00 PM	6	60	4	15	40	17	18	34	4	5	17	8	
15 PM	5	46	7	22	28	15	14	22	1	3	26	10	
30 PM	5	58	4	23	52	32	26	30	6	3	23	11	
45 PM	6	46	0	16	50	26	17	26	5	6	31	4	
5:00 PM	11	67	3	19	45	25	23	32	7	4	33	4	
15 PM	8	51	1	12	44	24	18	35	1	3	21	11	
30 PM	3	17	1	9	29	18	11	15	2	1	12	5	
45 PM	3	58	3	20	49	23	21	25	3	6	25	18	
6:00 PM													
15 PM													
30 PM													
45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TC
VOLUMES =	47	403	23	136	337	180	148	219	29	31	188	71	

PM Peak Hr Begins at 430 PM

PEAK													
VOLUMES =	30	222	8	70	191	107	84	123	19	16	108	30	

ADDITIONS: SIGNALIZED

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: JEFFERSON DATE: 6/24/99 CITY: LA QUINTA
E-W STREET: 52TH ST DAY: THURSDAY
PROJECT# 0437003A

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1	0	1	2	1	1	1	0	1	2	0	

6:00 AM													
15 AM													
30 AM													
45 AM													
7:00 AM	18	34	1	7	56	10	20	47	29	2	26	14	264
15 AM	15	28	2	12	51	11	19	49	23	0	26	13	249
30 AM	13	25	4	9	47	10	23	36	27	1	25	16	236
45 AM	23	27	2	7	60	16	16	34	37	1	30	12	265
8:00 AM	15	31	3	4	30	11	10	27	20	2	20	10	183
15 AM	21	20	0	2	24	10	13	21	22	1	21	11	166
30 AM	14	32	3	3	35	7	21	30	21	1	22	10	199
45 AM	26	36	1	6	30	15	13	32	15	0	9	6	189
9:00 AM													
15 AM													
30 AM													
45 AM													
10:00 AM													
15 AM													
30 AM													
45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	145	233	16	50	333	90	135	276	194	8	179	92	1751

PM Peak Hr Begins at 700 AM

PEAK													
VOLUMES =	69	114	9	35	214	47	78	166	116	4	107	55	1014

ADDITIONS: 4-WAY STOP

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: JEFFERSON DATE: 6/24/99 CITY: LA QUINTA

E-W STREET: 52TH ST DAY: THURSDAY

PROJECT# 0437003P

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1	0	1	2	1	1	1	0	1	2	0	

2:00 PM													
15 PM													
30 PM													
45 PM													
3:00 PM													
15 PM													
30 PM													
45 PM													
4:00 PM	16	35	3	6	28	15	20	36	19	1	27	6	21
15 PM	23	25	1	8	19	8	10	27	13	2	33	11	18
30 PM	24	34	0	17	21	18	17	42	9	1	19	5	20
45 PM	23	39	0	9	25	16	10	24	18	1	35	8	20
5:00 PM	31	51	0	19	29	24	18	27	21	2	49	11	28
15 PM	26	40	1	11	16	16	9	25	14	0	29	4	19
30 PM	18	32	3	7	26	14	16	34	21	0	25	4	20
45 PM	17	24	2	7	24	17	19	33	20	1	26	6	19
6:00 PM													
15 PM													
30 PM													
45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	178	280	10	84	188	128	119	248	135	8	243	55	16

PM Peak Hr Begins at 430 PM

PEAK VOLUMES =	104	164	1	56	91	74	54	118	62	4	132	28	8
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ADDITIONS: 4-WAY STOP

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: JEFFERSON DATE: 6/22/99 CITY: LA QUINTA

E-W STREET: 54TH ST DAY: TUESDAY

PROJECT# 0437001A

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1	1	0	1	0	0	2	0	1	1	0	

6:00 AM													
15 AM													
30 AM													
45 AM													
7:00 AM	1	17	6	46	38	0	1	1	0	2	1	20	133
15 AM	0	32	8	34	22	1	0	0	0	2	0	14	113
30 AM	0	36	1	29	15	2	1	0	0	4	3	18	109
45 AM	0	24	2	34	51	1	0	1	0	9	2	15	139
8:00 AM	0	32	4	29	37	2	0	3	1	6	3	18	135
15 AM	0	33	8	19	26	1	0	0	1	5	0	18	111
30 AM	0	29	6	24	18	1	1	0	0	0	1	19	99
45 AM	1	37	2	25	2	0	0	0	0	0	0	16	83
9:00 AM													
15 AM													
30 AM													
45 AM													
10:00 AM													
15 AM													
30 AM													
45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	2	240	37	240	209	8	3	5	2	28	10	138	922

AM Peak Hr Begins at 715 AM

PEAK VOLUMES =	0	124	15	126	125	6	1	4	1	21	8	65	496
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ADDITIONS: 4-WAY STOP

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: JEFFERSON DATE: 6/22/99 CITY: LA QUINTA

E-W STREET: 54TH ST DAY: TUESDAY

PROJECT# 0437001P

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1	1	0	1	0	0	2	0	1	1	0	

2:00 PM													
15 PM													
30 PM													
45 PM													
3:00 PM													
15 PM													
30 PM													
45 PM													
4:00 PM	0	36	8	12	26	1	1	0	0	3	0	25	11
15 PM	1	36	10	9	28	1	2	2	0	1	1	12	10
30 PM	0	34	7	11	28	2	0	1	0	1	0	20	10
45 PM	1	31	4	12	37	0	0	0	0	4	0	18	10
5:00 PM	2	45	3	13	29	0	1	0	0	2	0	24	11
15 PM	0	39	7	11	27	0	1	0	0	3	0	15	10
30 PM	0	26	1	15	32	0	0	1	0	4	3	16	9
45 PM	0	29	2	8	18	0	1	0	0	4	1	16	7
6:00 PM													
15 PM													
30 PM													
45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	4	276	42	91	225	4	6	4	0	22	5	146	8

AM Peak Hr Begins at 430 PM

PEAK
VOLUMES = 3 149 21 47 121 2 2 1 0 10 0 77 4

ADDITIONS: 4-WAY STOP

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

I-S STREET: JEFFERSON ST. DATE: 6/9/99 CITY: LA QUINTA

E-W STREET: COUNTRY CLUB DR DAY: WEDNESDAY

PROJECT# 0420001A

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1			1	1	1		1				

6:00 AM													
15 AM													
30 AM													
45 AM													
7:00 AM	84	58		65	56	36		71					370
15 AM	76	56		57	41	38		59					327
30 AM	107	77		54	92	50		64					444
45 AM	101	59		36	46	42		68					352
8:00 AM	84	77		61	59	45		59					385
15 AM	43	48		21	29	36		27					204
30 AM	57	32		35	31	38		49					242
45 AM	47	44		39	30	37		29					226
9:00 AM													
15 AM													
30 AM													
45 AM													
10:00 AM													
15 AM													
30 AM													
45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	599	451	0	0	368	384	322	0	426	0	0	0	2550

AM Peak Hr Begins at 715 AM PEAK HOUR FACTOR .85

PEAK
VOLUMES = 368 269 0 0 208 238 175 0 250 0 0 0 1508

ADDITIONS: 3-WAY STOP
NORTH/SOUTH/EAST

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: JEFFERSON ST. DATE: 6/9/99 CITY: LA QUINTA

E-W STREET: COUNTRY CLUB DR DAY: WEDNESDAY

PROJECT# 0420001P

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1			1	1	1		1				
2:00 PM													
15 PM													
30 PM													
45 PM													
3:00 PM													
15 PM													
30 PM													
45 PM													
4:00 PM		58	51		53	49	118		84				413
15 PM		52	54		59	39	84		77				365
30 PM		48	49		44	31	58		65				295
45 PM		40	40		47	55	77		79				338
5:00 PM		60	51		71	52	67		96				397
15 PM		51	46		64	46	64		87				358
30 PM		48	42		65	33	44		83				315
45 PM		52	49		76	32	36		64				309
6:00 PM													
15 PM													
30 PM													
45 PM													

TOTAL NL NT NR SL ST SR EL ET ER WL WT WR TOTAL
VOLUMES = 0 409 382 0 479 337 548 0 635 0 0 0 2790

PM Peak Hr Begins at 400 PM PEAK HOUR FACTOR .88

PEAK
VOLUMES = 0 198 194 0 203 174 337 0 305 0 0 0 1411

ADDITIONS:3-WAY STOP
NORTH/SOUTH/EAST

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: JEFFERSON ST. DATE: 6/9/99 CITY: LA QUINTA

E-W STREET: FRED WARING DR. DAY: WEDNESDAY

PROJECT# 0420002A

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1	1	1	1	1	1	2	1	1	2	1	
6:00 AM													
15 AM													
30 AM													
45 AM													
7:00 AM	23	80	9	15	71	20	29	57	31	12	82	15	444
15 AM	24	82	13	16	64	27	27	57	16	19	73	32	450
30 AM	35	97	13	12	64	38	41	77	28	14	90	30	539
45 AM	16	86	9	16	60	24	45	66	26	20	81	26	475
8:00 AM	19	94	7	11	60	27	30	58	32	11	76	33	458
15 AM	27	79	11	16	60	29	18	53	29	8	70	16	416
30 AM	20	74	9	11	55	18	16	41	24	8	68	16	360
45 AM	22	57	12	7	57	19	17	35	23	6	59	11	325
9:00 AM													
15 AM													
30 AM													
45 AM													
10:00 AM													
15 AM													
30 AM													
45 AM													

TOTAL NL NT NR SL ST SR EL ET ER WL WT WR TOTAL
VOLUMES = 186 649 83 104 491 202 223 444 209 98 599 179 3467

AM Peak Hr Begins at 715 AM PEAK HOUR FACTOR .89

PEAK
VOLUMES = 94 359 42 55 248 116 143 258 102 64 320 121 1922

ADDITIONS:SIGNALIZED

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: JEFFERSON ST. DATE: 6/9/99 CITY: LA QUINTA

E-W STREET: FRED WARING DR. DAY: WEDNESDAY

PROJECT# 0420002P

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1	1	1	1	1	1	2	1	1	2	1	
2:00 PM													
15 PM													
30 PM													
45 PM													
3:00 PM													
15 PM													
30 PM													
45 PM													
4:00 PM	23	66	8	15	93	18	16	80	40	11	73	9	452
15 PM	31	69	11	22	83	24	13	92	37	11	84	18	495
30 PM	21	77	17	12	96	21	12	59	22	7	76	15	435
45 PM	29	58	21	12	105	16	8	86	35	8	68	17	463
5:00 PM	26	87	12	26	97	25	15	61	26	7	46	12	440
15 PM	25	77	10	22	92	27	16	81	44	7	59	20	480
30 PM	18	68	17	14	106	30	12	64	47	9	72	14	471
45 PM	18	56	15	11	111	31	14	72	28	9	61	16	442
6:00 PM													
15 PM													
30 PM													
45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	191	558	111	134	783	192	106	595	279	69	539	121	3678

PM Peak Hr Begins at 445 PM PEAK HOUR FACTOR .96

PEAK
VOLUMES = 98 290 60 74 400 98 51 292 152 31 245 63 1854

ADDITIONS: SIGNALIZED

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: JEFFERSON ST. DATE: 6/9/99 CITY: LA QUINTA

E-W STREET: MILES AVE. DAY: WEDNESDAY

PROJECT# 0420003A

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	1	2	0	0	1	0	0	2	1	
6:00 AM													
15 AM													
30 AM													
45 AM													
7:00 AM	2	44	4	32	65	12	10	23	3	7	34	44	280
15 AM	2	56	12	37	72	7	7	27	3	12	53	55	343
30 AM	4	49	11	31	58	5	13	24	5	21	58	74	353
45 AM	3	64	15	33	56	6	9	24	7	10	54	69	350
8:00 AM	4	54	9	47	71	4	7	30	6	18	29	49	328
15 AM	3	46	7	31	64	6	8	30	6	9	42	49	301
30 AM	7	57	5	28	39	4	3	15	5	3	45	52	263
45 AM	3	62	4	22	52	4	3	18	5	10	40	35	258
9:00 AM													
15 AM													
30 AM													
45 AM													
10:00 AM													
15 AM													
30 AM													
45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	28	432	67	261	477	48	60	191	40	90	355	427	2476

AM Peak Hr Begins at 715 AM PEAK HOUR FACTOR .95

PEAK
VOLUMES = 13 223 47 148 257 22 36 105 21 61 194 247 1374

ADDITIONS: 4-WAY STOP

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: JEFFERSON ST. DATE: 6/9/99 CITY: LA QUINTA

E-W STREET: MILES AVE. DAY: WEDNESDAY

PROJECT# 0420003P

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
2:00 PM	0	1	0	1	2	0	0	1	0	0	2	1	
15 PM													
30 PM													
45 PM													
3:00 PM													
15 PM													
30 PM													
45 PM													
4:00 PM	2	55	12	62	64	13	0	33	6	6	40	37	330
15 PM	5	54	14	63	53	11	5	48	4	6	40	46	349
30 PM	3	58	19	53	63	8	6	49	6	6	51	52	374
45 PM	4	55	12	53	64	15	7	50	9	9	43	29	350
5:00 PM	6	69	15	61	73	15	9	59	8	12	50	51	428
15 PM	4	82	12	69	88	14	10	65	11	15	58	49	477
30 PM	6	48	11	67	77	16	8	48	7	4	46	47	385
45 PM	4	39	8	58	70	9	6	37	6	3	35	36	311
6:00 PM													
15 PM													
30 PM													
45 PM													

TOTAL NL NT NR SL ST SR EL ET ER WL WT WR TOTAL
VOLUMES = 34 460 103 486 552 101 51 389 57 61 363 347 3004

PM Peak Hr Begins at 445 PM PEAK HOUR FACTOR .85

PEAK
VOLUMES = 20 254 50 250 302 60 34 222 35 40 197 176 1640

ADDITIONS: 4-WAY STOP

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: MADISON

DATE: 6/22/99

CITY: LA QUINTA

E-W STREET: 50TH ST

DAY: TUESDAY

PROJECT# 0437006A

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
6:00 AM	0	1	0					1	0	0	1		
15 AM													
30 AM													
45 AM													
7:00 AM	0		0					26	0	0	32		58
15 AM	1		1					27	0	0	36		65
30 AM	0		0					32	1	0	37		70
45 AM	0		1					35	2	1	38		77
8:00 AM	0		1					28	1	0	34		64
15 AM	1		1					28	0	1	20		51
30 AM	1		0					28	1	1	19		50
45 AM	3		1					22	1	0	25		52
9:00 AM													
15 AM													
30 AM													
45 AM													
10:00 AM													
15 AM													
30 AM													
45 AM													

TOTAL NL NT NR SL ST SR EL ET ER WL WT WR TOTAL
VOLUMES = 6 0 5 0 0 0 0 226 6 3 241 0 487

AM Peak Hr Begins at 715 AM

PEAK
VOLUMES = 1 0 3 0 0 0 0 122 4 1 145 0 276

ADDITIONS: 1-WAY STOP N/B

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: MADISON DATE: 6/22/99 CITY: LA QUINTA

E-W STREET: 50TH ST DAY: TUESDAY

PROJECT# 0437006P

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTA
	0	1	0					1	0	0	1		

2:00 PM													
15 PM													
30 PM													
45 PM													
3:00 PM													
15 PM													
30 PM													
45 PM													
4:00 PM	0		0					38	0	1	23		6
15 PM	1		0					39	1	0	33		7
30 PM	2		1					36	0	1	32		7
45 PM	4		0					40	1	2	22		6
5:00 PM	2		0					37	1	1	27		6
15 PM	0		2					43	0	2	30		7
30 PM	2		1					35	1	0	30		6
45 PM	1		0					36	3	1	29		7
6:00 PM													
15 PM													
30 PM													
45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOT
VOLUMES =	12	0	4	0	0	0	0	304	7	8	226	0	5

PM Peak Hr Begins at 430 PM

PEAK													
VOLUMES =	8	0	3	0	0	0	0	156	2	6	111	0	2

ADDITIONS: 1-WAY STOP N/B

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: MADISON DATE: 6/22/99 CITY: LA QUINTA

E-W STREET: 52ND ST DAY: TUESDAY

PROJECT# 0437007A

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	1	0	0	1			1	0	

6:00 AM													
15 AM													
30 AM													
45 AM													
7:00 AM				0		0	2	42		29	0	73	
15 AM				0		0	1	44		28	0	73	
30 AM				2		0	0	48		28	1	79	
45 AM				0		1	0	68		29	1	99	
8:00 AM				1		0	1	39		24	2	67	
15 AM				0		0	1	38		28	1	68	
30 AM				0		1	0	37		19	0	57	
45 AM				0		0	1	39		21	0	61	
9:00 AM													
15 AM													
30 AM													
45 AM													
10:00 AM													
15 AM													
30 AM													
45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	0	0	0	3	0	2	6	355	0	0	206	5	577

AM Peak Hr Begins at 700 AM

PEAK													
VOLUMES =	0	0	0	2	0	1	3	202	0	0	114	2	324

ADDITIONS: 1-WAY STOP S/B

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: MADISON DATE: 6/22/99 CITY: LA QUINTA

E-W STREET: 52ND ST. DAY: TUESDAY

PROJECT # 0437007P

====
NORTHBOUND SOUTHBOUND EASTBOUND WESTBOUND
=====

LANES: NL NT NR SL ST SR EL ET ER WL WT WR TOTAL
0 1 0 0 1 0 0 1 0 0 1 0

2:00 PM
15 PM
30 PM
45 PM
3:00 PM
15 PM
30 PM
45 PM
4:00 PM 1 0 0 35 24 0 60
15 PM 0 0 0 29 38 1 60
30 PM 0 0 1 29 44 2 70
45 PM 2 0 0 33 42 0 70
5:00 PM 0 0 0 38 35 1 70
15 PM 3 0 1 39 28 2 70
30 PM 2 0 0 28 28 3 60
45 PM 4 0 0 28 32 0 60
6:00 PM
15 PM
30 PM
45 PM

====
TOTAL NL NT NR SL ST SR EL ET ER WL WT WR TOTAL
VOLUMES = 0 0 0 12 0 0 2 259 0 0 271 9 5

AM Peak Hr Begins at 430 PM

PEAK
VOLUMES = 0 0 0 5 0 0 2 139 0 0 149 5 30

ADDITIONS:

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: MONROE DATE: 6/22/99 CITY: LA QUINTA

E-W STREET: 52RD ST DAY: TUESDAY

PROJECT # 0437008A

====
NORTHBOUND SOUTHBOUND EASTBOUND WESTBOUND
=====

LANES: NL NT NR SL ST SR EL ET ER WL WT WR TOTAL
0 1 0 0 1 0 0 1 0 0 1 0

6:00 AM
15 AM
30 AM
45 AM
7:00 AM 4 19 1 2 34 3 17 29 1 0 22 5 137
15 AM 0 29 0 13 25 5 14 27 5 1 26 11 156
30 AM 2 18 0 10 28 5 16 35 3 1 36 13 167
45 AM 3 27 2 16 37 5 28 35 4 2 26 8 193
8:00 AM 1 28 3 5 19 5 22 18 3 2 21 6 133
15 AM 0 29 0 6 24 6 17 21 3 3 18 7 134
30 AM 3 18 2 6 18 5 13 25 4 2 16 7 119
45 AM 2 24 2 5 21 6 7 19 3 2 15 6 112
9:00 AM
15 AM
30 AM
45 AM
10:00 AM
15 AM
30 AM
45 AM

====
TOTAL NL NT NR SL ST SR EL ET ER WL WT WR TOTAL
VOLUMES = 15 192 10 63 206 40 134 209 26 13 180 63 1151

AM Peak Hr Begins at 700 AM

PEAK
VOLUMES = 9 93 3 41 124 18 75 126 13 4 110 37 653

ADDITIONS: 4-WAY STOP

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: MONROE DATE: 6/22/99 CITY: LA QUINTA

E-W STREET: 52RD ST DAY: TUESDAY PROJECT# 0437008P

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL			
	0	1	0	0	1	0	0	1	0	0	1	0				

2:00 PM																
15 PM																
30 PM																
45 PM																
3:00 PM																
15 PM																
30 PM																
45 PM																
4:00 PM	3	25	1	8	25	7	6	29	6	1	20	10	141			
15 PM	5	34	0	17	28	9	9	30	2	2	19	11	166			
30 PM	4	35	1	16	16	8	10	29	6	1	39	4	169			
45 PM	5	32	0	18	18	10	8	22	5	1	20	7	146			
5:00 PM	3	22	1	17	30	13	12	16	4	0	23	11	152			
15 PM	8	29	0	16	22	10	6	26	2	1	30	10	160			
30 PM	4	26	1	13	17	8	7	24	2	1	22	12	137			
45 PM	5	15	2	14	24	7	7	22	3	0	23	13	135			
6:00 PM																
15 PM																
30 PM																
45 PM																

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	37	218	6	119	180	72	65	198	30	7	196	78	120

AM Peak Hr Begins at 415 PM

PEAK VOLUMES = 17 123 2 68 92 40 39 97 17 4 101 33 633

ADDITIONS: 4-WAY STOP

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: MONROE DATE: 6/22/99 CITY: LA QUINTA

E-W STREET: 54TH ST DAY: TUESDAY PROJECT# 0437010A

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL			
	0	1	0	0	1	0	0	1	0	0	1	0				

6:00 AM																
15 AM																
30 AM																
45 AM																
7:00 AM	0	13	1	4	25	4	8	2	2	1	2	2	64			
15 AM	1	36	1	4	41	1	1	3	1	1	7	3	100			
30 AM	0	16	0	2	26	2	2	3	1	0	4	2	58			
45 AM	1	23	1	4	27	9	3	3	2	0	5	7	85			
8:00 AM	0	19	0	2	18	2	7	6	0	0	4	5	63			
15 AM	0	12	0	3	25	4	5	1	1	0	4	3	58			
30 AM	1	17	0	3	21	3	6	2	1	0	5	3	62			
45 AM	2	20	0	4	19	2	8	4	0	0	8	4	71			
9:00 AM																
15 AM																
30 AM																
45 AM																
10:00 AM																
15 AM																
30 AM																
45 AM																

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	5	156	3	26	202	27	40	24	8	2	39	29	561

AM Peak Hr Begins at 700 AM

PEAK VOLUMES = 2 88 3 14 119 16 14 11 6 2 18 14 307

ADDITIONS: 2-WAY STOP E/B & W/B

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: MONROE DATE: 6/22/99 CITY: LA QUINTA

E-W STREET: 54TH ST DAY: TUESDAY

PROJECT# 0437010P

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	1	0	0	1	0	0	1	0	

2:00 PM													
15 PM													
30 PM													
45 PM													
3:00 PM													
15 PM													
30 PM													
45 PM													
4:00 PM	0	28	0	7	19	1	4	6	1	0	0	3	6
15 PM	0	19	0	8	15	2	4	8	0	1	3	2	6
30 PM	0	21	2	7	23	1	3	5	1	0	3	2	6
45 PM	1	19	0	8	22	0	2	3	3	1	5	3	6
5:00 PM	0	23	1	6	16	5	1	4	0	2	5	2	6
15 PM	0	25	0	5	26	1	4	3	1	0	1	1	6
30 PM	0	28	0	3	13	0	3	4	1	0	6	2	6
45 PM	0	19	0	5	21	0	1	6	1	2	3	3	6
6:00 PM													
15 PM													
30 PM													
45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	1	182	3	49	155	10	22	39	8	6	26	18	5

AM Peak Hr Begins at 430 PM

PEAK	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	1	88	3	26	87	7	10	15	5	3	14	8	26

ADDITIONS: 2-WAY STOP E/B & W/B

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

STREET: EISENHOWER DR. DATE: 2/2/2000 CITY: LA QUINTA

STREET: AVENUE 50 DAY: WEDNESDAY PROJECT# 0089001A

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	2	0	1	2	0	0	2	0	1	1	1	

2:00 AM													
15 AM													
30 AM													
45 AM													
3:00 AM	8	107	11	9	48	6	4	6	8	10	6	6	229
15 AM	5	113	10	8	57	7	3	7	10	11	1	7	239
30 AM	7	118	11	7	64	6	2	5	11	12	0	5	248
45 AM	5	121	13	11	83	5	3	9	9	13	3	12	287
4:00 AM	7	123	14	10	70	7	1	8	15	17	0	11	283
15 AM	5	116	13	9	71	5	4	7	14	13	4	10	271
30 AM	7	120	9	10	63	3	4	6	12	8	4	10	256
45 AM	6	86	8	9	61	5	6	5	7	10	6	9	218
5:00 AM													
15 AM													
30 AM													
45 AM													
6:00 AM													
15 AM													
30 AM													
45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	50	904	89	73	517	44	27	53	86	94	24	70	2031

AM Peak Hr Begins at 745 AM

PEAK	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	24	480	49	40	287	20	12	30	50	51	11	43	1097

ADDITIONS: SIGNALIZED

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET: EISENHOWER DR. DATE: 2/2/2000 CITY: LA QUINTA
E-W STREET: AVENUE 50 DAY: WEDNESDAY
PROJECT# 0089001P

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL				
2:00 PM	1	2	0	1	2	0	0	2	0	1	1	1					
15 PM																	
30 PM																	
45 PM																	
3:00 PM																	
15 PM																	
30 PM																	
45 PM																	
4:00 PM	4	71	13	12	121	2	11	6	9	25	8	11	293				
15 PM	4	80	14	6	105	1	12	6	10	22	10	12	282				
30 PM	8	70	13	7	119	5	11	7	8	30	9	7	294				
45 PM	9	69	15	9	153	8	18	4	4	30	10	6	335				
5:00 PM	7	81	12	11	156	7	11	6	9	37	8	9	354				
15 PM	5	82	7	16	160	8	4	6	6	41	5	10	350				
30 PM	3	76	11	10	149	9	11	5	10	32	10	9	335				
45 PM	7	74	10	9	137	7	7	7	7	24	8	9	306				
6:00 PM																	
15 PM																	
30 PM																	
45 PM																	
TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL				
VOLUMES =	47	603	95	80	1100	47	85	47	63	241	68	73	2549				

PM Peak Hr Begins at 445 PM

PEAK
VOLUMES = 24 308 45 46 618 32 44 21 29 140 33 34 1374

ADDITIONS: SIGNALIZED

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

S STREET: WASHINGTON DATE: 2/2/2000 CITY: LA QUINTA
E-W STREET: CALLE TAMPICO DAY: WEDNESDAY
PROJECT# 0089003A

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL				
6:00 AM	1	2	1	1	2	1	1	1	1	1	1	0					
15 AM																	
30 AM																	
45 AM																	
7:00 AM	3	35	17	11	41	18	27	27	7	11	27	12	236				
15 AM	6	43	24	9	53	21	29	31	5	16	33	9	279				
30 AM	4	45	38	10	66	20	31	35	6	14	37	10	316				
45 AM	5	46	31	11	84	24	33	42	4	17	31	11	339				
8:00 AM	4	54	37	11	86	22	40	38	8	17	32	11	360				
15 AM	6	52	46	13	75	29	36	40	7	19	39	13	375				
30 AM	5	64	39	9	71	19	31	36	7	14	36	12	343				
45 AM	5	56	35	12	61	22	30	31	6	11	31	11	311				
9:00 AM																	
15 AM																	
30 AM																	
45 AM																	
10:00 AM																	
15 AM																	
30 AM																	
45 AM																	
TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL				
VOLUMES =	38	395	267	86	537	175	257	280	50	119	266	89	2559				

AM Peak Hr Begins at 745 AM

PEAK
VOLUMES = 20 216 153 44 316 94 140 156 26 67 138 47 1417

ADDITIONS: SIGNALIZED

N-S STREET:		WASHINGTON		DATE: 2/2/2000		CITY: LA QUINTA								
E-W STREET:		CALLE TAMPICO		DAY: WEDNESDAY		PROJECT# 0089003P								
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	
2:00 PM	1	2	1	1	2	1	1	1	1	1	1	0		
15 PM														
30 PM														
45 PM														
3:00 PM														
15 PM														
30 PM														
45 PM														
4:00 PM	11	90	12	9	53	45	40	12	18	11	17	3	321	
15 PM	18	83	6	3	72	60	48	18	24	18	24	8	382	
30 PM	14	93	11	9	83	51	41	14	17	11	21	5	370	
45 PM	10	90	6	14	82	47	44	10	10	8	18	3	342	
5:00 PM	17	87	11	8	88	52	46	14	16	14	22	4	379	
15 PM	24	80	20	6	95	61	52	14	10	17	18	4	401	
30 PM	20	81	18	7	81	46	43	12	14	10	19	3	354	
45 PM	14	85	11	9	78	50	46	10	12	9	13	4	341	
6:00 PM														
15 PM														
30 PM														
45 PM														
TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	
VOLUMES =	128	689	95	65	632	412	360	104	121	98	152	34	2890	
PM Peak Hr Begins at 430 PM														
PEAK														
VOLUMES =	65	350	48	37	348	211	183	52	53	50	79	16	1492	
ADDITIONS: SIGNALIZED														

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	2	1	1	2	1	1	1	0	1	2	0	
=====													
6:00 AM													
15 AM													
30 AM													
45 AM													
7:00 AM													
15 AM	3	174	10	31	137	17	6	16	3	10	22	16	445
30 AM	4	186	9	40	164	16	7	21	4	11	27	23	512
45 AM	5	194	10	36	188	17	8	17	5	12	30	34	556
8:00 AM	5	191	7	49	220	19	10	19	4	16	32	84	656
15 AM	4	199	10	47	217	22	11	18	7	14	33	36	618
30 AM	7	219	11	40	176	20	14	17	9	11	27	25	576
45 AM	6	234	18	42	107	21	17	19	13	9	16	20	522
9:00 AM	6	217	16	35	127	19	9	14	8	11	18	21	501
15 AM													
30 AM													
45 AM													
10:00 AM													
15 AM													
30 AM													
45 AM													
=====													
TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	40	1514	91	320	1336	151	82	141	53	94	205	259	4386
AM Peak Hr Begins at				730 AM									
PEAK													
VOLUMES = 21 803 38 172 801 78 43 71 25 53 122 179 2406													
ADDITIONS:SIGNALIZED													

SOUTHLAND CAR COUNTERS
VEHICLE AND MANUAL COUNTS

N-S STREET:	WASHINGTON					DATE: 2/2/2000			CITY: LA QUINTA				
E-W STREET:	AVENUE 50					DAY: WEDNESDAY			PROJECT# 0089002P				
=====													
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 1	WT 2	WR 0	TOTAL
=====													
2:00 PM													
15 PM													
30 PM													
45 PM													
3:00 PM													
15 PM													
30 PM													
45 PM													
4:00 PM	6	139	7	43	119	35	11	11	6	15	9	41	442
15 PM	7	119	8	37	143	27	11	20	9	10	11	30	432
30 PM	2	122	7	40	160	22	12	15	12	11	18	27	448
45 PM	9	127	7	41	157	30	11	20	11	18	14	36	481
5:00 PM	8	135	6	31	164	20	12	18	8	20	12	41	475
15 PM	7	143	8	43	161	29	11	15	8	17	14	31	487
30 PM	3	154	9	50	150	27	13	9	6	18	13	27	479
45 PM	6	136	7	40	143	25	10	10	8	17	12	25	439
6:00 PM													
15 PM													
30 PM													
45 PM													
=====													
TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	48	1075	59	325	1197	215	91	118	68	126	103	258	3683
=====													
PM Peak Hr Begins at	445 PM												
PEAK													
VOLUMES =	27	559	30	165	632	106	47	62	33	73	53	135	1922
=====													
ADDITIONS: SIGNALIZED													

08/03/2000 04:48 9899248604

COUNTS UNLIMITED INC

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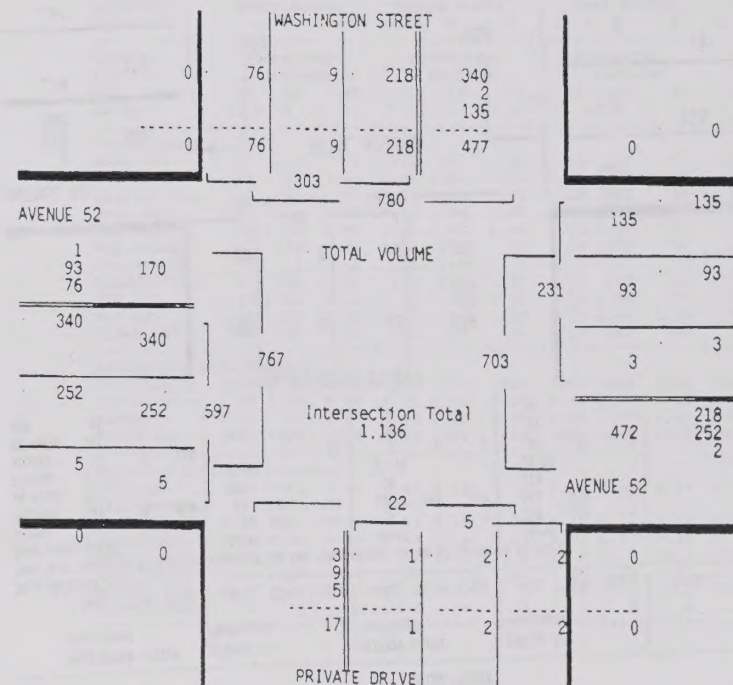
CITY OF LA QUINTA
N/S: WASHINGTON STREET
S/W: AVENUE 52
WEATHER: SUNNY

Counts Unlimited, Inc
25424 Jaclyn Avenue
Moreno Valley, CA 92557
909-247-6716

Site Code : 00516614
Start Date: 08/02/00
File I.D. : LQWAS12A
Page : 1

TOTAL VOLUME

WASHINGTON STREET Southbound				AVENUE 52 Westbound			PRIVATE DRIVE Northbound			AVENUE 52 Eastbound			Total	
Left	Thru	Right		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Date 08/02/00														
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 08/02/00														
Peak start 07:15														
Volume	218	9	76		07:15		07:15		07:15					
					3	93	135		1	2	2	340	252	5
Percent	72%	3%	25%		1%	40%	58%		20%	40%	40%	57%	42%	1%
Pk total	303				231				5			597		
Biggest	07:30				07:30				07:15			07:30		
Volume	54	2	22		0	32	45		1	0	1	104	80	3
BI total	82				77				2			187		
PBT	.92				.75				.62			.80		



Received Aug-03-00 04:40am
08/03/2000 04:48 9099248604

from 9099248604 + RKJK
COUNTS UNLIMITED INC

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PAGE 03

CITY OF LA QUINTA
W/S: WASHINGTON STREET
S/W: AVENUE 52
WEATHER: SUNNY

Counts Unlimited, Inc
25424 Jaclyn Avenue
Moreno Valley, CA 92557
909-247-6716

Site Code : 00516614
Start Date: 08/02/00
File I.D. : LQWAS2AM
Page : 1

TOTAL VOLUME

Date 08/02/00	WASHINGTON STREET Southbound			AVENUE 52 Westbound			PRIVATE DRIVE Northbound			AVENUE 52 Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	57	0	16	1	15	23	0	0	0	71	46	0	229
07:15	63	2	15	2	21	27	1	0	1	91	54	0	277
07:30	58	2	22	0	32	45	0	0	0	104	80	3	346
07:45	52	2	24	1	18	24	0	1	1	72	73	2	281
Gr Total	231	6	77	4	86	129	1	1	2	338	253	5	1133
08:00	44	3	15	0	22	29	0	1	0	73	45	0	232
08:15	52	2	15	0	24	24	0	1	0	51	45	1	219
08:30	45	1	22	0	18	24	0	0	0	58	37	0	205
08:45	42	1	25	2	19	26	1	1	2	56	47	0	240
Gr Total	183	7	81	0	103	103	1	3	2	238	174	1	896
TOTAL	414	13	158	4	189	232	2	4	4	576	427	6	2029

Peak Hour Analysis By Individual Approach for the Period: 07:00 to 09:00 on 08/02/00

Peak start 07:00	07:15			08:00			07:15		
	Volume	Percent	Pk total	Volume	Percent	Pk total	Volume	Percent	Pk total
07:00	231	6	77	3	93	135	1	3	2
07:15	240	24	259	18	40%	58%	178	50%	33%
07:30	231			6			597		1%
07:45	231			6			597		1%
07:00	58	2	22	0	32	45	1	1	2
07:15	63			77			104		80
07:30	58			77			187		3
07:45	52			75			187		3
Gr Total	96			175			187		3

Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 08/02/00

Peak start 07:15	07:15			07:15			07:15		
	Volume	Percent	Pk total	Volume	Percent	Pk total	Volume	Percent	Pk total
07:15	214	9	76	3	93	135	1	2	2
07:30	214	34	259	18	40%	58%	178	50%	33%
07:45	214			6			597		1%
07:00	58	2	22	0	32	45	1	1	2
07:15	63			77			104		80
07:30	58			77			187		3
07:45	52			75			187		3
Gr Total	92			175			187		3

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COUNTS UNLIMITED INC

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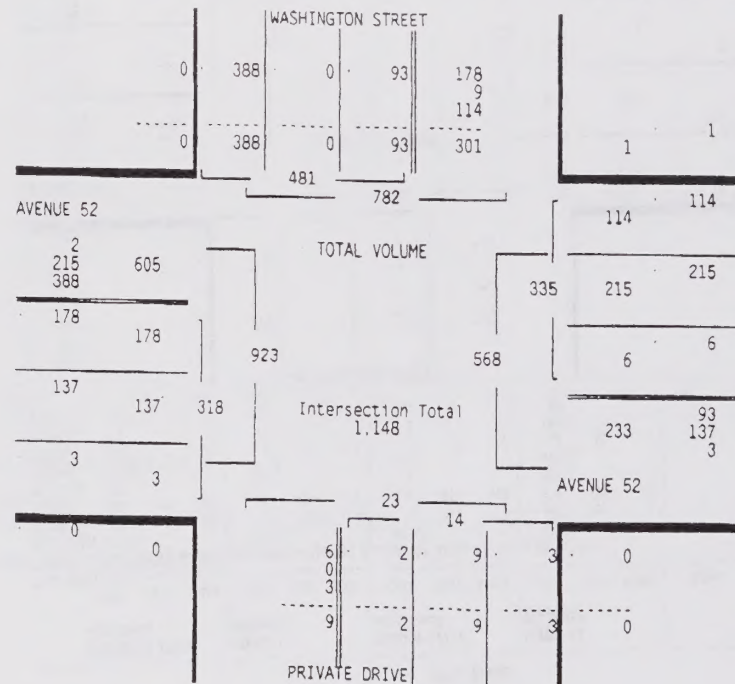
CITY OF LA QUINTA
W/S: WASHINGTON STREET
S/W: AVENUE 52
WEATHER: SUNNY

Counts Unlimited, Inc
25424 Jaclyn Avenue
Moreno Valley, CA 92557
909-247-6716

Site Code : 00516614
Start Date: 08/02/00
File I.D. : LQWAS2PM
Page : 1

TOTAL VOLUME

Date 08/02/00	WASHINGTON STREET Southbound			AVENUE 52 Westbound			PRIVATE DRIVE Northbound			AVENUE 52 Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	57	0	16	1	15	23	0	0	0	71	46	0	229
07:15	63	2	15	2	21	27	1	0	1	91	54	0	277
07:30	58	2	22	0	32	45	0	0	0	104	80	3	346
07:45	52	2	24	1	18	24	0	1	1	72	73	2	281
Gr Total	231	6	77	4	86	129	1	1	2	338	253	5	1133
08:00	44	3	15	0	22	29	0	1	0	73	45	0	232
08:15	52	2	15	0	24	24	0	1	0	51	45	1	219
08:30	45	1	22	0	18	24	0	0	0	58	37	0	205
08:45	42	1	25	2	19	26	1	1	2	56	47	0	240
Gr Total	183	7	81	0	103	103	1	3	2	238	174	1	896
TOTAL	414	13	158	4	189	232	2	4	4	576	427	6	2029



Received Aug-03-00 04:40am
08/03/2000 04:48 9099248604

from 9099248604 → RKJK
COUNTS UNLIMITED INC.

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CITY OF LA QUINTA
N/S: WASHINGTON STREET
E/W: AVENUE 52
WEATHER: SUNNY

Counts Unlimited, Inc
25424 Jaclyn Avenue
Moreno Valley, CA 92557
909-247-6716

Site Code : 00516614
Start Date: 08/02/00
Pile I.D. : LANAS2PM
Page : 1

TOTAL VOLUME

WASHINGTON STREET Southbound				AVENUE 52 Westbound			PRIVATE DRIVE Northbound			AVENUE 52 Eastbound			Total	
Left	Thru	Right		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Date 08/02/00														
16:00	38	3	75		0	33	32	2	2	0	41	41	0	267
16:15	26	0	57		0	59	34	0	2	0	27	27	0	242
16:30	23	0	72		0	41	26	0	3	0	37	31	0	233
16:45	25	0	34		1	43	20	1	2	0	19	18	0	273
Br Total	112	3	308		1	176	112	3	9	0	144	147	0	1015
17:00	17	0	88		3	61	50	0	4	2	60	32	0	317
17:15	27	0	114		0	64	26	1	2	0	35	18	0	297
17:30	24	0	32		2	47	18	0	1	1	44	29	3	261
17:45	12	0	52		2	15	22	0	0	0	16	12	0	261
Br Total	80	0	256		7	217	116	1	7	3	185	131	3	1136
TOTAL	192	3	564		8	393	228	4	16	3	329	278	3	2151

Peak Hour Analysis By Individual Approach for the Period: 16:00 to 18:00 on 08/02/00

Peak start 16:45			17:00			16:45			17:00		
Volume	93	0	358	7	217	116	7	11	2	185	131
Percent	19%	0%	81%	2%	64%	34%	13%	13%	13%	58%	41%
Pk total	481			340			15			319	
Highest	17:15			17:00			17:00			17:00	
Volume	27	0	114	3	61	50	0	4	2	60	32
Hi total	141			114			6			32	
PBP	.85			.75			.62			.87	

Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 08/02/00

Peak start 16:45			16:45			16:45			16:45		
Volume	93	0	358	6	215	114	2	9	3	178	137
Percent	19%	0%	81%	2%	64%	34%	14%	64%	21%	56%	43%
Pk total	481			335			14			318	
Highest	17:15			17:00			17:00			17:00	
Volume	27	0	114	3	61	50	0	4	2	60	32
Hi total	141			114			6			32	
PBP	.85			.73			.58			.86	

MITIG8 - Default Scenario Mon Aug 7, 2000 06:47:40

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The Ranch
Existing
AM Peak Hour

Level Of Service Computation Report 1997 HCM Operations Method (Base Volume Alternative)

Intersection #3 Jefferson St. (NS) / SR-111 (EW)

Cycle (sec): 67 Critical Vol./Cap. (X): 0.387
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 22.8
Optimal Cycle: 67 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	20	20	10	20	20	10	15	15	10	15	15
Lanes:	1	0	1	0	1	0	1	0	2	0	1	1

Volume Module:

Base Vol:	107	182	51	122	191	51	18	302	68	53	522	89
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	107	182	51	122	191	51	18	302	68	53	522	89
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	107	182	51	122	191	51	18	302	68	53	522	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	107	182	51	122	191	51	18	302	68	53	522	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	107	182	51	122	191	51	18	302	68	53	522	89

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.95	0.85	0.95	0.95	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat:	1805	1900	1615	1805	1900	1615	1805	3610	1615	1805	3610	1615

Capacity Analysis Module:

Vol/Sat:	0.06	0.10	0.03	0.07	0.10	0.03	0.01	0.08	0.04	0.03	0.14	0.06
Crit Moves:	****			****			****			****		
Green/Cycle:	0.15	0.30	0.30	0.15	0.30	0.30	0.15	0.22	0.22	0.15	0.22	0.22
Volume/Cap:	0.40	0.32	0.11	0.45	0.34	0.11	0.07	0.37	0.19	0.20	0.65	0.25
Delay/Veh:	26.7	18.6	17.1	27.2	18.7	17.1	24.6	22.3	21.3	25.3	25.4	21.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.7	18.6	17.1	27.2	18.7	17.1	24.6	22.3	21.3	25.3	25.4	21.7
DesignQueue:	3	5	1	4	5	1	1	9	2	2	16	3

The Ranch
Existing
PM Peak Hour

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #3 Jefferson St. (NS) / SR-111 (EW)

Cycle (sec): 67 Critical Vol./Cap. (X): 0.492
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 27.7
Optimal Cycle: 67 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 20 20	10 20 20	10 15 15	10 15 15
Lanes:	1 0 1 0 1	1 0 1 0 1	1 0 2 0 1	1 0 2 0 1

Volume Module:

Base Vol:	95 178 90	108 190 69	60 712 102	97 615 99
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	95 178 90	108 190 69	60 712 102	97 615 99
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	95 178 90	108 190 69	60 712 102	97 615 99
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	95 178 90	108 190 69	60 712 102	97 615 99
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	95 178 90	108 190 69	60 712 102	97 615 99

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 1.00 0.85	0.95 1.00 0.85	0.95 0.95 0.85	0.95 0.95 0.85
Lanes:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 2.00 1.00	1.00 2.00 1.00
Final Sat:	1805 1900 1615	1805 1900 1615	1805 3610 1615	1805 3610 1615

Capacity Analysis Module:

Vol/Sat:	0.05 0.09 0.06	0.06 0.10 0.04	0.03 0.20 0.06	0.05 0.17 0.06
Crit Moves:	***	***	***	***
Green/Cycle:	0.15 0.30 0.30	0.15 0.30 0.30	0.15 0.22 0.22	0.15 0.22 0.22
Volume/Cap:	0.35 0.31 0.19	0.40 0.34 0.14	0.22 0.68 0.28	0.36 0.76 0.27
Delay/Veh:	26.4 18.5 17.6	26.8 18.7 17.4	25.5 36.2 22.0	26.4 28.6 21.9
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	26.4 18.5 17.6	26.8 18.7 17.4	25.5 36.2 22.0	26.4 28.6 21.9
DesignQueue:	3 5 2	3 5 2	2 22 3	3 19 3

The Ranch
Existing
AM Peak Hour

Level Of Service Computation Report
1997 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #4 Jefferson St. (NS) / Ave. 50 (EW)

Cycle (sec): 0 Critical Vol./Cap. (X): 0.473
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 11.5
Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0
Lanes:	0 1 0 0 1	0 1 0 0 1	0 1 0 0 1	0 1 0 0 1

Volume Module:

Base Vol:	19 189 16	33 245 94	50 95 35	6 102 80
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	19 189 16	33 245 94	50 95 35	6 102 80
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	19 189 16	33 245 94	50 95 35	6 102 80
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	19 189 16	33 245 94	50 95 35	6 102 80
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	19 189 16	33 245 94	50 95 35	6 102 80

Saturation Flow Module:

Lanes:	0.09 0.91 1.00	0.12 0.88 1.00	0.34 0.66 1.00	0.06 0.94 1.00
Final Sat:	52 513 634	70 518 665	178 339 588	29 497 588

Capacity Analysis Module:

Vol/Sat:	0.37 0.37 0.03	0.47 0.47 0.14	0.28 0.28 0.06	0.21 0.21 0.14
Crit Moves:	****	****	****	****
Delay/Veh:	12.1 12.1 8.2	13.6 13.6 8.7	11.6 11.6 8.7	10.6 10.6 9.2
Delay Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	12.1 12.1 8.2	13.6 13.6 8.7	11.6 11.6 8.7	10.6 10.6 9.2
LOS by Move:	B B A	B B A	B B A	B B A
ApproachDel:	11.8	12.3	11.0	10.0
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	11.8	12.3	11.0	10.0
LOS by Appr:	B	B	B	B

The Ranch
Existing
PM Peak Hour

Level Of Service Computation Report
1997 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #4 Jefferson St. (NS) / Ave. 50 (EW)

Cycle (sec): 0 Critical Vol./Cap. (X): 0.466
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 12.7
Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Lanes:	0 1 0 0 1	0 1 0 0 1	0 1 0 0 1	0 1 0 0 1

Volume Module:

Base Vol:	30	222	8	70	191	107	84	123	19	16	108	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	30	222	8	70	191	107	84	123	19	16	108	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	30	222	8	70	191	107	84	123	19	16	108	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	30	222	8	70	191	107	84	123	19	16	108	30
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	30	222	8	70	191	107	84	123	19	16	108	30

Saturation Flow Module:

Lanes:	0.12	0.88	1.00	0.27	0.73	1.00	0.41	0.59	1.00	0.13	0.87	1.00
Final Sat:	66	487	618	150	410	639	207	304	582	65	436	558

Capacity Analysis Module:

Vol/Sat:	0.46	0.46	0.01	0.47	0.47	0.17	0.41	0.41	0.03	0.25	0.25	0.05
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Delay/Veh:	13.7	13.7	8.3	13.9	13.9	9.1	13.5	13.5	8.6	11.4	11.4	8.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.7	13.7	8.3	13.9	13.9	9.1	13.5	13.5	8.6	11.4	11.4	8.9
LOS by Move:	B	B	A	B	B	A	B	B	A	B	B	A
ApproachDel:	13.6			12.5			13.1			10.9		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	13.6			12.5			13.1			10.9		
LOS by Appr:	B			B			B			B		

The Ranch
Existing
AM Peak Hour

Level Of Service Computation Report
1997 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #5 Jefferson St. (NS) / Ave. 52 (EW)

Cycle (sec): 0 Critical Vol./Cap. (X): 0.476
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 11.4
Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Lanes:	1 0 0 1 0	1 0 2 0 1	1 0 0 1 0	1 0 1 1 0

Volume Module:

Base Vol:	69	114	9	35	214	47	78	166	116	4	107	55
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	69	114	9	35	214	47	78	166	116	4	107	55
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	69	114	9	35	214	47	78	166	116	4	107	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	69	114	9	35	214	47	78	166	116	4	107	55
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	69	114	9	35	214	47	78	166	116	4	107	55

Saturation Flow Module:

Lanes:	1.00	0.93	0.07	1.00	2.00	1.00	1.00	0.59	0.41	1.00	1.32	0.68
Final Sat:	490	492	39	480	1033	572	520	348	243	460	663	358

Capacity Analysis Module:

Vol/Sat:	0.14	0.23	0.23	0.07	0.21	0.08	0.15	0.48	0.48	0.01	0.16	0.15
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Delay/Veh:	10.7	10.8	10.8	10.3	10.9	9.1	10.5	13.4	13.4	10.1	10.7	10.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.7	10.8	10.8	10.3	10.9	9.1	10.5	13.4	13.4	10.1	10.7	10.2
LOS by Move:	B	B	B	B	B	A	B	B	B	B	B	B
ApproachDel:	10.8			10.6			12.8			10.5		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	10.8			10.6			12.8			10.5		
LOS by Appr:	B			B			B			B		

The Ranch
Existing
PM Peak Hour

Level of Service Computation Report
1997 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #5 Jefferson St. (NS) / Ave. 52 (EW)

Cycle (sec): 0 Critical Vol./Cap. (X): 0.307
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 10.4
Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0
Lanes:	1 0 0 1 0	1 0 2 0 1	1 0 0 1 0	1 0 1 1 0

Volume Module:

Base Vol:	104 164 1	56 91 74	54 118 62	4 132 28
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	104 164 1	56 91 74	54 118 62	4 132 28
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	104 164 1	56 91 74	54 118 62	4 132 28
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	104 164 1	56 91 74	54 118 62	4 132 28
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol.:	104 164 1	56 91 74	54 118 62	4 132 28

Saturation Flow Module:

Lanes:	1.00 0.99 0.01	1.00 2.00 1.00	1.00 0.66 0.34	1.00 1.65 0.35
Final Sat.:	534 576 4	498 1068 597	520 384 202	483 869 188

Capacity Analysis Module:

Vol/Sat:	0.19 0.28 0.28	0.11 0.09 0.12	0.10 0.31 0.31	0.01 0.15 0.15
Crit Moves:	****	****	****	****
Delay/Veh:	10.6 10.8 10.8	10.4 9.6 9.1	10.0 10.9 10.9	9.8 10.2 10.0
Delay Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	10.6 10.8 10.8	10.4 9.6 9.1	10.0 10.9 10.9	9.8 10.2 10.0
LOS by Move:	B B B	A A A	B B B	A A A
ApproachDel:	10.7	9.7	10.7	10.1
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	10.7	9.7	10.7	10.1
LOS by Appr:	B	A	B	B

The Ranch
Existing
AM Peak Hour

Level of Service Computation Report
1997 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #7 Jefferson St. (NS) / Ave. 54 (EW)

Cycle (sec): 0 Critical Vol./Cap. (X): 0.362
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.6
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0
Lanes:	1 0 1 0 1	0 0 1 0 0	1 0 0 1 0	1 0 0 1 0

Volume Module:

Base Vol:	1 124 15	126 125 6	1 4 1	21 8 65
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	1 124 15	126 125 6	1 4 1	21 8 65
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	1 124 15	126 125 6	1 4 1	21 8 65
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	1 124 15	126 125 6	1 4 1	21 8 65
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol.:	1 124 15	126 125 6	1 4 1	21 8 65

Saturation Flow Module:

Lanes:	1.00 1.00 1.00	0.49 0.49 0.02	1.00 0.80 0.20	1.00 0.11 0.89
Final Sat.:	646 710 824	348 346 17	557 494 124	573 77 622

Capacity Analysis Module:

Vol/Sat:	0.00 0.17 0.02	0.36 0.36 0.36	0.00 0.01 0.01	0.04 0.10 0.10
Crit Moves:	****	****	****	****
Delay/Veh:	8.2 8.7 7.0	10.7 10.7 10.7	8.8 8.2 8.2	8.9 8.1 8.1
Delay Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	8.2 8.7 7.0	10.7 10.7 10.7	8.8 8.2 8.2	8.9 8.1 8.1
LOS by Move:	A A A	B B B	A A A	A A A
ApproachDel:	8.5	10.7	8.3	8.2
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	8.5	10.7	8.3	8.2
LOS by Appr:	A	B	A	A

The Ranch
Existing
PM Peak Hour

Level Of Service Computation Report
1997 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #7 Jefferson St. (NS) / Ave. 54 (EW)

Cycle (sec): 0 Critical Vol./Cap. (X): 0.238
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 8.8
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0
Lanes:	1 0 1 0 1	0 0 1 0 0	1 0 0 1 0	1 0 0 1 0

Volume Module:

Base Vol:	3 149	21 47 121	2 2 1 1	10 1 77
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	3 149	21 47 121	2 2 1 1	10 1 77
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	3 149	21 47 121	2 2 1 1	10 1 77
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	3 149	21 47 121	2 2 1 1	10 1 77
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol.:	3 149	21 47 121	2 2 1 1	10 1 77

Saturation Flow Module:

Lanes:	1.00 1.00 1.00	0.28 0.71 0.01	1.00 0.50 0.50	1.00 0.01 0.99
Final Sat.:	560 729 848	197 508 8	577 334 334	591 9 726

Capacity Analysis Module:

Vol/Sat:	0.00 0.20 0.02	0.24 0.24 0.24	0.00 0.00 0.00	0.02 0.11 0.11
Crit Moves:	****	****	****	****
Delay/Veh:	8.1 8.8 7.0	9.5 9.5 9.5	8.6 7.8 7.8	8.6 7.8 7.8
Delay Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	8.1 8.8 7.0	9.5 9.5 9.5	8.6 7.8 7.8	8.6 7.8 7.8
LOS by Move:	A A A	A A A	A A A	A A A
ApproachDel:	8.5	9.5	8.2	7.9
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	8.5	9.5	8.2	7.9
LOS by Appr:	A	A	A	A

Tentative Tract Map No. 29323

Existing
AM Peak Hour

Level Of Service Computation Report
1994 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #2 Jefferson St. (NS) / Country Club Dr. (EW)

Cycle (sec): 1 Critical Vol./Cap. (X): 0.774
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 12.0
Optimal Cycle: 0 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Lanes:	1 0 1 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0

Volume Module:

Base Vol:	368 269	0 0 208 238	175 0 250	0 0 0
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	368 269	0 0 208 238	175 0 250	0 0 0
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	368 269	0 0 208 238	175 0 250	0 0 0
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	368 269	0 0 208 238	175 0 250	0 0 0
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol.:	368 269	0 0 208 238	175 0 250	0 0 0

Saturation Flow Module:

Sat/Lane:	495 495 495	336 336 336	323 323 323	0 0 0
Adjustment:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Lanes:	1.00 1.00 0.00	0.00 1.00 1.00	1.00 0.00 1.00	0.00 0.00 0.00
Final Sat.:	495 495 0	0 336 336	323 0 323	0 0 0

Capacity Analysis Module:

Vol/Sat:	0.74 0.54 0.00	0.00 0.62 0.71	0.54 0.00 0.77	0.00 0.00 0.00
Crit Moves:	****	****	****	****
ApproachV/S:	0.64	0.66	0.66	XXXXX

Level Of Service Module:

Delay/Veh:	16.9 7.9 0.0	0.0 10.5 14.8	7.8 0.0 18.9	0.0 0.0 0.0
Delay Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	16.9 7.9 0.0	0.0 10.5 14.8	7.8 0.0 18.9	0.0 0.0 0.0
LOS by Move:	C B *	* C C	B * C	* * *
ApproachDel:	11.5	12.5	12.2	XXXXXX
LOS by Appr:	C	C	C	F

Tentative Tract Map No. 29323
Existing
PM Peak Hour

Level Of Service Computation Report

1994 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #2 Jefferson St. (NS) / Country Club Dr. (EW)

Cycle (sec): 1 Critical Vol./Cap. (X): 0.819
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 15.0
Optimal Cycle: 0 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	0	0	0	1	1	0	0	0	0	0

Volume Module:

Base Vol:	198	194	0	0	203	174	337	0	305	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	198	194	0	0	203	174	337	0	305	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	198	194	0	0	203	174	337	0	305	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	198	194	0	0	203	174	337	0	305	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	198	194	0	0	203	174	337	0	305	0	0	0

Saturation Flow Module:

Sat/Lane:	371	371	371	248	248	248	423	423	423	0	0	0
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	371	371	0	0	248	248	423	0	423	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.53	0.52	0.00	0.00	0.82	0.70	0.80	0.00	0.72	0.00	0.00	0.00
Crit Moves:	****			****			****			****		
ApproachV/S:	0.53			0.76			0.76			xxxxx		

Level Of Service Module:

Delay/Veh:	7.6	7.3	0.0	0.0	22.4	14.4	20.6	0.0	15.5	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	7.6	7.3	0.0	0.0	22.4	14.4	20.6	0.0	15.5	0.0	0.0	0.0
LOS by Move:	B	B	*	*	D	C	D	*	C	*	*	*
ApproachDel:	7.4			18.0			17.9			xxxxxxx		
LOS by Appr:	B			C			C			F		

Tentative Tract Map No. 29323
Existing
AM Peak Hour

Level Of Service Computation Report

1994 HCM Operations Method (Base Volume Alternative)

Intersection #4 Jefferson St. (NS) / Fred Waring Dr. (EW)

Cycle (sec): 67 Critical Vol./Cap. (X): 0.472
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 14.5
Optimal Cycle: 67 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	20	20	10	20	20	10	15	15	10	15	15
Lanes:	1	0	1	1	0	1	1	0	2	1	0	2

Volume Module:

Base Vol:	94	359	42	55	248	116	143	258	102	64	320	121
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	94	359	42	55	248	116	143	258	102	64	320	121
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	94	359	42	55	248	116	143	258	102	64	320	121
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	94	359	42	55	248	116	143	258	102	64	320	121
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	94	359	42	55	248	116	143	271	102	64	336	121

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1805	1900	1615	1805	1900	1615	1805	3800	1615	1805	3800	1615

Capacity Analysis Module:

Vol/Sat:	0.05	0.19	0.03	0.03	0.13	0.07	0.08	0.07	0.06	0.04	0.09	0.07
Crit Moves:	****			****			****			****		
Green/Cycle:	0.15	0.30	0.30	0.15	0.30	0.30	0.15	0.22	0.22	0.15	0.22	0.22
Volume/Cap:	0.35	0.63	0.09	0.20	0.44	0.24	0.53	0.32	0.28	0.24	0.39	0.33

Level Of Service Module:

Delay/Veh:	16.9	14.8	10.9	16.2	12.6	11.5	18.6	14.1	14.0	16.3	14.5	14.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.9	14.8	10.9	16.2	12.6	11.5	18.6	14.1	14.0	16.3	14.5	14.3
Queue:	2	6	1	1	4	2	3	4	2	1	5	2

Tentative Tract Map No. 29323
Existing
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #4 Jefferson St. (NS) / Fred Waring Dr. (EW)

Cycle (sec): 67 Critical Vol./Cap. (X): 0.458
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 14.6
Optimal Cycle: 67 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	20	20	10	20	20	10	15	15	10	15	15
Lanes:	1	0	1	0	1	0	1	0	2	0	1	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	98	290	60	74	400	98	51	292	152	31	245	63
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	98	290	60	74	400	98	51	292	152	31	245	63
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	98	290	60	74	400	98	51	292	152	31	245	63
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	98	290	60	74	400	98	51	292	152	31	245	63
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	98	290	60	74	400	98	51	307	152	31	257	63

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1805	1900	1615	1805	1900	1615	1805	3800	1615	1805	3800	1615

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.05	0.15	0.04	0.04	0.21	0.06	0.03	0.08	0.09	0.02	0.07	0.04
Crit Moves:	****			****			****			****		
Green/Cycle:	0.15	0.30	0.30	0.15	0.30	0.30	0.15	0.22	0.22	0.15	0.22	0.22
Volume/Cap:	0.36	0.51	0.12	0.27	0.71	0.20	0.19	0.36	0.42	0.12	0.30	0.17

Level Of Service Module:	North Bound			South Bound			East Bound			West Bound		
Delay/Veh:	16.9	13.2	11.1	16.5	16.2	11.4	16.2	14.3	14.9	15.9	14.0	13.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.9	13.2	11.1	16.5	16.2	11.4	16.2	14.3	14.9	15.9	14.0	13.6
Queue:	2	5	1	1	7	1	1	5	2	1	4	1

Tentative Tract Map No. 29323
Existing
AM Peak Hour

Level Of Service Computation Report
1994 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #5 Jefferson St. (NS) / Miles Ave. (EW)

Cycle (sec): 1 Critical Vol./Cap. (X): 1.077
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 14.7
Optimal Cycle: 0 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	1	0	0	1	0	0	1	0	1	0	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	13	223	47	148	257	22	36	105	21	61	194	247
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	223	47	148	257	22	36	105	21	61	194	247
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	13	223	47	148	257	22	36	105	21	61	194	247
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	13	223	47	148	257	22	36	105	21	61	194	247
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	13	223	47	148	257	22	36	105	21	61	194	247

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	304	304	304	376	376	376	298	298	298	284	284	284
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.06	0.94	1.00	0.37	0.63	1.00	0.26	0.74	1.00	0.24	0.76	1.00
Final Sat.:	17	287	304	137	239	376	76	222	298	68	216	284

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.78	0.78	0.15	1.08	1.08	0.06	0.47	0.47	0.07	0.90	0.90	0.87
Crit Moves:	****			****			****			****		
ApproachV/S:	0.47			0.57			0.27			0.88		

Level Of Service Module:	North Bound			South Bound			East Bound			West Bound		
Delay/Veh:	19.1	19.1	1.8	59.9	59.9	1.2	6.0	6.0	1.3	30.3	30.3	27.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.1	19.1	1.8	59.9	59.9	1.2	6.0	6.0	1.3	30.3	30.3	27.2
LOS by Move:	C	C	A	F	F	A	B	B	A	E	E	D
ApproachDel:	5.9			8.7			2.8			28.7		
LOS by Appr:	B			B			A			D		

Tentative Tract Map No. 29323
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Level Of Service Computation Report

1994 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #5 Jefferson St. (NS) / Miles Ave. (EW)

Cycle (sec): 1 Critical Vol./Cap. (X): 1.412
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 15.4
Optimal Cycle: 0 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Lanes:	0 1 0 0 1	0 1 0 0 1	0 1 0 0 1	0 1 0 0 1

Volume Module:	North Bound	South Bound	East Bound	West Bound
Base Vol:	20 254 50	250 302 60	34 222 35	40 197 176
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	20 254 50	250 302 60	34 222 35	40 197 176
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	20 254 50	250 302 60	34 222 35	40 197 176
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	20 254 50	250 302 60	34 222 35	40 197 176
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol.:	20 254 50	250 302 60	34 222 35	40 197 176

Saturation Flow Module:	North Bound	South Bound	East Bound	West Bound
Sat/Lane:	307 307 307	391 391 391	279 279 279	257 257 257
Adjustment:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Lanes:	0.07 0.93 1.00	0.45 0.55 1.00	0.13 0.87 1.00	0.17 0.83 1.00
Final Sat.:	22 285 307	177 214 391	37 242 279	43 214 257

Capacity Analysis Module:	North Bound	South Bound	East Bound	West Bound
Vol/Sat:	0.89 0.89 0.16	1.41 1.41 0.15	0.92 0.92 0.13	0.92 0.92 0.68
Crit Moves:	****	****	****	****
ApproachV/S:	0.53	0.78	0.52	0.80

Level Of Service Module:	North Bound	South Bound	East Bound	West Bound
Delay/Veh:	29.7 29.7 1.9	213.7 214 1.8	32.7 32.7 1.6	33.3 33.3 13.5
Delay Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	29.7 29.7 1.9	213.7 214 1.8	32.7 32.7 1.6	33.3 33.3 13.5
LOS by Move:	D D A	F F A	E E A	E E C
ApproachDel:	7.4	19.6	7.3	21.2
LOS by Appr:	B	C	B	D

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Level Of Service Computation Report

1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 Madison St. (NS) / Ave. 50 (EW)

Average Delay (sec/veh): 9.2 Worst Case Level Of Service: A

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	0 0 1 0 0	0 0 0 0 0	0 0 0 1 0	0 1 0 0 0

Volume Module:	North Bound	South Bound	East Bound	West Bound
Base Vol:	1 0 3	0 0 0	0 122 4	1 145 0
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	1 0 3	0 0 0	0 122 4	1 145 0
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	1 0 3	0 0 0	0 122 4	1 145 0
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Final Vol.:	1 0 3	0 0 0	0 122 4	1 145 0

Critical Gap Module:	North Bound	South Bound	East Bound	West Bound
Critical Gap:	6.4 xxxxx	6.2 xxxxx	xxxxx xxxxx	4.1 xxxxx
FollowUpTim:	3.5 xxxxx	3.3 xxxxx	xxxxx xxxxx	2.2 xxxxx

Capacity Module:	North Bound	South Bound	East Bound	West Bound
Conflict Vol:	271 xxxxx	124 xxxxx	xxxxx xxxxx	126 xxxxx
Potent Cap.:	723 xxxxx	932 xxxxx	xxxxx xxxxx	1473 xxxxx
Move Cap.:	722 xxxxx	932 xxxxx	xxxxx xxxxx	1473 xxxxx

Level Of Service Module:	North Bound	South Bound	East Bound	West Bound
Stopped Del:	xxxxx xxxxx	xxxxx xxxxx	xxxxx xxxxx	7.4 xxxxx
LOS by Move:	A	A	A	A
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx 869 xxxxx	xxxx xxxxx	xxxx xxxxx	xxxx xxxxx
Shrd StpDel:	xxxxx 9.2 xxxxx	xxxxx xxxxx	xxxxx xxxxx	7.4 xxxxx
Shared LOS:	A	A	A	A
ApproachDel:	9.2	xxxxxx	xxxxxx	xxxxxx
ApproachLOS:	A	A	A	A

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Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 Madison St. (NS) / Ave. 50 (EW)

Average Delay (sec/veh): 9.8 Worst Case Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include
Lanes: 0 0 1 0 0 0 0 0 0 0 0 1 0 0 0 0

Volume Module:

Base Vol: 8 0 3 0 0 0 0 0 156 2 6 111 0 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 8 0 3 0 0 0 0 0 156 2 6 111 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 3 0 3 0 0 0 0 0 156 2 6 111 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Final Vol: 8 0 3 0 0 0 0 0 156 2 6 111 0 0

Critical Gap Module:

Critical Gp: 6.4 xxxx 6.2 xxxx xxxx xxxx xxxx 4.1 xxxx xxxx

FollowUpTim: 3.5 xxxx 3.3 xxxx xxxx xxxx xxxx 2.2 xxxx xxxx

Capacity Module:

Conflict Vol: 260 xxxx 157 xxxx xxxx xxxx xxxx 158 xxxx xxxx

Potent Cap.: 714 xxxx 894 xxxx xxxx xxxx xxxx 1434 xxxx xxxx

Move Cap.: 712 xxxx 894 xxxx xxxx xxxx xxxx 1434 xxxx xxxx

Level Of Service Module:

Stopped Del:xxxx xxxx xxxx xxxx xxxx xxxx 7.5 xxxx xxxx

LOS by Move: A A A A A A A A

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.:xxxx 754 xxxx xxxx xxxx xxxx 745 xxxx xxxx

Shrd StpDel:xxxx 9.8 xxxx xxxx xxxx xxxx 9.9 xxxx xxxx

Shared LOS: A A A A A A A A

ApproachDel: 9.8 A A A A A A A A

ApproachLOS: A A A A A A A A

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Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 Madison St. (NS) / Ave. 52 (EW)

Average Delay (sec/veh): 9.9 Worst Case Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 1 0

Volume Module:

Base Vol: 0 0 0 2 0 1 3 202 0 0 114 2

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 0 0 2 0 1 3 202 0 0 114 2

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 0 0 0 2 0 1 3 202 0 0 114 2

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Final Vol: 0 0 0 2 0 1 3 202 0 0 114 2

Critical Gap Module:

Critical Gp:xxxx xxxx xxxx 6.4 xxxx 6.2 4.1 xxxx xxxx xxxx xxxx

FollowUpTim:xxxx xxxx xxxx 3.5 xxxx 3.3 2.2 xxxx xxxx xxxx xxxx

Capacity Module:

Conflict Vol: xxxx xxxx xxxx 323 xxxx 115 116 xxxx xxxx xxxx xxxx

Potent Cap.: xxxx xxxx xxxx 675 xxxx 943 1485 xxxx xxxx xxxx xxxx

Move Cap.: xxxx xxxx xxxx 674 xxxx 943 1485 xxxx xxxx xxxx xxxx

Level Of Service Module:

Stopped Del:xxxx xxxx xxxx xxxx xxxx 7.4 xxxx xxxx xxxx xxxx

LOS by Move: A A A A A A A A

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxx 745 xxxx 745 xxxx xxxx xxxx

Shrd StpDel:xxxx xxxx xxxx 9.9 xxxx 9.9 xxxx xxxx xxxx

Shared LOS: A A A A A A A A

ApproachDel:xxxx 9.9 A A A A A A A A

ApproachLOS: A A A A A A A A

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Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 Madison St. (NS) / Ave. 52 (EW)

Average Delay (sec/veh): 10.0 Worst Case Level Of Service: A

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0

Volume Module:

	North Bound	South Bound	East Bound	West Bound
Base Vol.:	0 0 0	5 0 1	2 139 0	0 149 5
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	0 0 0	5 0 1	2 139 0	0 149 5
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	0 0 0	5 0 1	2 139 0	0 149 5
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Final Vol.:	0 0 0	5 0 1	2 139 0	0 149 5

Critical Gap Module:

	North Bound	South Bound	East Bound	West Bound
Critical Gap:	6.4 xxx	6.2 4.1 xxx	xxxx xxx	xxxx xxx
FollowUpTim:	3.5 xxx	3.3 2.2 xxx	xxxx xxx	xxxx xxx

Capacity Module:

	North Bound	South Bound	East Bound	West Bound
Cnflict Vol:	xxxx xxx	295 xxx	152 154 xxx	xxxx xxx
Potent Cap.:	xxxx xxx	701 xxx	900 1439 xxx	xxxx xxx
Move Cap.:	xxxx xxx	700 xxx	900 1439 xxx	xxxx xxx

Level Of Service Module:

	North Bound	South Bound	East Bound	West Bound
Stopped Del:	xxxx xxx	xxxx xxx	7.5 xxx	xxxx xxx
LOS by Move:	A	A	A	A
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx xxx	727 xxx	xxxx xxx	xxxx xxx
Shrd StpDel:	xxxx xxx	10.0 xxx	7.5 xxx	xxxx xxx
Shared LOS:	A	A	A	A
ApproachDel:	xxxxx	10.0	xxxxx	xxxxx
ApproachLOS:	A	A	A	A

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Level Of Service Computation Report
1997 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #12 Monroe St. (NS) / Ave. 52 (EW)

Cycle (sec): 0 Critical Vol./Cap. (X): 0.301
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.3
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0 0	0 0 1 0 0	0 0 1 0 0	0 0 1 0 0
Lanes:	0 0 1 0 0	0 0 1 0 0	0 0 1 0 0	0 0 1 0 0

Volume Module:

	North Bound	South Bound	East Bound	West Bound
Base Vol:	0 0 3	41 124 13	75 126 13	4 110 37
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	0 0 3	41 124 13	75 126 13	4 110 37
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	0 0 3	41 124 13	75 126 13	4 110 37
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	0 0 3	41 124 13	75 126 13	4 110 37
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol.:	0 0 3	41 124 13	75 126 13	4 110 37

Saturation Flow Module:

	North Bound	South Bound	East Bound	West Bound
Lanes:	0.08 0.89 0.03	0.22 0.68 0.10	0.35 0.59 0.06	0.03 0.73 0.24
Final Sat.:	57 593 19	156 471 68	249 419 43	19 522 176

Capacity Analysis Module:

	North Bound	South Bound	East Bound	West Bound
Vol/Sat:	0.16 0.16 0.16	0.26 0.26 0.26	0.30 0.30 0.30	0.21 0.21 0.21
Crit Moves:				
Delay/Veh:	8.9 8.9 8.9	9.5 9.5 9.5	9.7 9.7 9.7	8.9 8.9 8.9
Delay Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	8.9 8.9 8.9	9.5 9.5 9.5	9.7 9.7 9.7	8.9 8.9 8.9
LOS by Move:	A A A	A A A	A A A	A A A
ApproachDel:	8.9	9.5	9.7	8.9
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	8.9	9.5	9.7	8.9
LOS by Appr:	A	A	A	A

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Level Of Service Computation Report
1997 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #12 Monroe St. (NS) / Ave. 52 (EW)

Cycle (sec): 0 Critical Vol./Cap. (X): 0.276
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.1
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Right:	Include	Include	Include	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Lanes:	0 0 1 0 0	0 0 1 0 0	0 0 1 0 0	0 0 1 0 0

Volume Module:	North Bound	South Bound	East Bound	West Bound
Base Vol:	17 123 2	68 92 40	39 97 17	4 101 33
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	17 123 2	68 92 40	39 97 17	4 101 33
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	17 123 2	68 92 40	39 97 17	4 101 33
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	17 123 2	68 92 40	39 97 17	4 101 33
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol.:	17 123 2	68 92 40	39 97 17	4 101 33

Saturation Flow Module:	North Bound	South Bound	East Bound	West Bound
Lanes:	0.12 0.87 0.01	0.34 0.46 0.20	0.25 0.64 0.11	0.03 0.73 0.24
Final Sat.:	84 606 10	247 334 145	177 441 77	20 518 169

Capacity Analysis Module:	North Bound	South Bound	East Bound	West Bound
Vol/Sat:	0.20 0.20 0.20	0.28 0.28 0.28	0.22 0.22 0.22	0.20 0.20 0.20
Crit Moves:	****	****	****	****
Delay/Veh:	9.0 9.0 9.0	9.4 9.4 9.4	9.1 9.1 9.1	8.8 8.8 8.8
Delay Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	9.0 9.0 9.0	9.4 9.4 9.4	9.1 9.1 9.1	8.8 8.8 8.8
LOS by Move:	A A A	A A A	A A A	A A A
ApproachDel:	9.0	9.4	9.1	8.8
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	9.0	9.4	9.1	8.8
LOS by Appr:	A	A	A	A

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Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 Monroe St. (NS) / Ave. 54 (EW)

Average Delay (sec/veh): 10.4 Worst Case Level Of Service: B

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Right:	Include	Include	Include	Include
Lanes:	0 0 1 0 0	0 0 1 0 0	0 0 1 0 0	0 0 1 0 0

Volume Module:	North Bound	South Bound	East Bound	West Bound
Base Vol:	2 88 3	14 119 16	14 11 6	2 18 14
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	2 88 3	14 119 16	14 11 6	2 18 14
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	2 88 3	14 119 16	14 11 6	2 18 14
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	2 88 3	14 119 16	14 11 6	2 18 14

Critical Gap Module:	North Bound	South Bound	East Bound	West Bound
Critical Gap:	4.1 xxxx xxxxx	4.1 xxxx xxxxx	7.1 6.5 6.2	7.1 6.5 6.2
FollowUpTime:	2.2 xxxx xxxxx	2.2 xxxx xxxxx	1.5 4.0 3.3	1.5 4.0 3.3

Capacity Module:	North Bound	South Bound	East Bound	West Bound
Conflict Vol:	135 xxxx xxxxx	91 xxxx xxxxx	265 250 127	257 257 89
Potent Cap.:	1462 xxxx xxxxx	1517 xxxx xxxxx	692 656 929	700 651 974
Move Cap.:	1462 xxxx xxxxx	1517 xxxx xxxxx	662 649 929	681 644 974

Level Of Service Module:	North Bound	South Bound	East Bound	West Bound
Stopped Del:	7.5 xxxx xxxxx	7.4 xxxx xxxxx	xxxxx xxxxx xxxxx xxxxx xxxxx	xxxxx xxxxx xxxxx
LOS by Move:	A	A	B	B
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx xxxx xxxxx	xxxx xxxx xxxxx	xxxx 696 xxxxx	xxxx 751 xxxxx
3rd StpDel:	xxxx xxxxx xxxxx	xxxx xxxxx xxxxx	xxxx 10.4 xxxxx	xxxx 10.0 xxxxx
Shared LOS:	A	A	B	B
ApproachDel:	xxxxxx	xxxxxx	10.4	10.0
ApproachLOS:	A	A	B	B

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Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 Monroe St. (NS) / Ave. 54 (EW)

Average Delay (sec/veh): 10.3 Worst Case Level Of Service: B

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 1 0 0 0 0 1 0 0 0 0 1 0 0

Volume Module:
Base Vol: 1 88 3 26 87 7 10 15 5 3 14 8
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1 88 3 26 87 7 10 15 5 3 14 8
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 1 88 3 26 87 7 10 15 5 3 14 8
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol: 1 88 3 26 87 7 10 15 5 3 14 8

Critical Gap Module:
Critical Gap: 4.1 xxxx xxxxx 4.1 xxxx xxxxx 7.1 6.5 6.2 7.1 6.5 6.2
FollowUpTim: 2.2 xxxx xxxxx 2.2 xxxx xxxxx 3.5 4.0 3.3 3.5 4.0 3.3

Capacity Module:
Conflict Vol: 94 xxxx xxxxx 91 xxxx xxxxx 245 236 91 244 238 89
Potent Cap.: 1513 xxxx xxxxx 1517 xxxx xxxxx 713 669 973 714 667 974
Move Cap.: 1513 xxxx xxxxx 1517 xxxx xxxxx 686 657 973 688 655 974

Level Of Service Module:
Stopped Del: 7.4 xxxx xxxxx 7.4 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: A A A A A A A A A A A A A A A A
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx 705 xxxxx xxxxx 736 xxxxx
Chrd StpDel: xxxxx xxxx xxxxx xxxxx xxxx xxxxx 10.3 xxxxx xxxxx 10.1 xxxxx
Shared LOS: B B B B B B B B B B B B B B B B
ApproachDel: xxxxxx xxxxxx 10.3 10.1
ApproachLOS: B B

Walgreens
Existing
AM Peak Hour

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #1 Eisenhower Dr. (NS) / Ave. 50 (EW)

Cycle (sec): 82 Critical Vol./Cap. (X): 0.244

Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 26.6

Optimal Cycle: 82 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 10 20 20 10 20 20 20 20 20 20 20 20

Lanes: 1 0 2 0 1 1 0 2 0 1 0 1 0 1 0 1 0 1

Volume Module:
Base Vol: 24 480 49 40 287 20 12 30 50 51 11 43
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 24 480 49 40 287 20 12 30 50 51 11 43
Added Vol: 0 0 0 1 0 0 0 1 0 0 1 1
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 24 480 49 41 287 20 12 31 50 51 12 44
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 24 480 49 41 287 20 12 31 50 51 12 44
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 24 480 49 41 287 20 12 31 50 51 12 44
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol: 24 480 49 41 287 20 12 31 50 51 12 44

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 0.85 0.95 0.95 0.85 0.94 0.94 0.81 0.95 1.00 0.85
Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 0.28 0.72 1.00 1.00 1.00 1.00
Final Sat: 1805 3610 1615 1805 3610 1615 497 1283 1534 1805 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.01 0.13 0.03 0.02 0.08 0.01 0.02 0.02 0.03 0.03 0.01 0.03
Crit Moves: ****
Green/Cycle: 0.12 0.24 0.24 0.12 0.24 0.24 0.24 0.24 0.24 0.24 0.24 0.24
Volume/Cap: 0.11 0.55 0.12 0.19 0.33 0.05 0.10 0.10 0.13 0.12 0.03 0.11
Delay/Veh: 32.3 27.7 24.3 32.8 25.7 23.8 24.1 24.1 24.3 24.2 23.6 24.2
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 32.3 27.7 24.3 32.8 25.7 23.8 24.1 24.1 24.3 24.2 23.6 24.2
DesignQueue: 1 17 2 2 10 1 0 1 2 2 0 2

Walgreens
Existing
PM Peak Hour

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #1 Eisenhower Dr. (NS) / Ave. 50 (EW)

Cycle (sec): 82 Critical Vol./Cap. (X): 0.341
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 28.1
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Split Phase	Split Phase
Rights:	Include	Include	Include	Include
Min. Green:	10 20 20	10 20 20	20 20 20	20 20 20
Lanes:	1 0 2 0 1	1 0 2 0 1	0 1 0 1 0	1 0 1 0 1

Volume Module:

Base Vol:	24 308 45	46 618 32	44 21 29	140 33 34
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	24 308 45	46 618 32	44 21 29	140 33 34
Added Vol:	0 0 0	4 0 0	0 4 0	0 4 4
PasserByVol:	0 0 0	0 0 0	0 0 0	0 0 0
Initial Fut:	24 308 45	50 618 32	44 25 29	140 37 38
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	24 308 45	50 618 32	44 25 29	140 37 38
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	24 308 45	50 618 32	44 25 29	140 37 38
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	24 308 45	50 618 32	44 25 29	140 37 38

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.95 0.85	0.95 0.95 0.85	0.90 0.87 0.87	0.95 1.00 0.85
Lanes:	1.00 2.00 1.00	1.00 2.00 1.00	0.88 0.52 0.60	1.00 1.00 1.00
Final Sat:	1805 3610 1615	1805 3610 1615	1512 859 996	1805 1900 1615

Capacity Analysis Module:

Vol/Sat:	0.01 0.09 0.03	0.03 0.17 0.02	0.03 0.03 0.03	0.08 0.02 0.02
Crit Moves:	0.01 0.09 0.03	0.03 0.17 0.02	0.03 0.03 0.03	0.08 0.02 0.02
Green/Cycle:	0.12 0.24 0.24	0.12 0.24 0.24	0.24 0.24 0.24	0.24 0.24 0.24
Volume/Cap:	0.11 0.35 0.11	0.23 0.70 0.08	0.12 0.12 0.12	0.32 0.08 0.10
Delay/Veh:	32.3 35.9 24.2	33.0 30.8 24.0	24.2 24.2 24.2	25.8 24.0 24.1
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	32.3 35.9 24.2	33.0 30.8 24.0	24.2 24.2 24.2	25.8 24.0 24.1
DesignQueue:	1 11 2	2 22 1	2 1 1	5 1 1

Walgreens
Existing
AM Peak Hour

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #3 Washington St. (NS) / Calle Tampico (EW)

Cycle (sec): 77 Critical Vol./Cap. (X): 0.355
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 24.2
Optimal Cycle: 77 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 20 20	10 20 20	10 25 25	10 25 25
Lanes:	1 0 2 0 1	1 0 2 0 1	1 0 1 0 1	1 0 0 1 0

Volume Module:

Base Vol:	20 216 153	44 316 94	140 156 26	67 138 47
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	20 216 153	44 316 94	140 156 26	67 138 47
Added Vol:	0 5 0	1 3 1	1 0 0	0 0 1
PasserByVol:	0 0 0	0 0 0	0 0 0	0 0 0
Initial Fut:	20 221 153	45 319 95	141 156 26	67 138 48
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	20 221 153	45 319 95	141 156 26	67 138 48
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	20 221 153	45 319 95	141 156 26	67 138 48
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	20 221 153	45 319 95	141 156 26	67 138 48

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.95 0.85	0.95 0.95 0.85	0.95 1.00 0.85	0.95 0.96 0.96
Lanes:	1.00 2.00 1.00	1.00 2.00 1.00	1.00 1.00 1.00	1.00 0.74 0.26
Final Sat:	1805 3610 1615	1805 3610 1615	1805 1900 1615	1805 1355 471

Capacity Analysis Module:

Vol/Sat:	0.01 0.06 0.09	0.02 0.09 0.06	0.08 0.08 0.02	0.04 0.10 0.10
Crit Moves:	0.01 0.06 0.09	0.02 0.09 0.06	0.08 0.08 0.02	0.04 0.10 0.10
Green/Cycle:	0.13 0.26 0.26	0.13 0.26 0.26	0.13 0.32 0.32	0.13 0.32 0.32
Volume/Cap:	0.09 0.24 0.36	0.19 0.34 0.23	0.60 0.25 0.05	0.29 0.31 0.31
Delay/Veh:	29.6 22.6 23.8	30.3 23.4 22.7	35.9 19.3 17.9	30.9 19.9 19.9
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	29.6 22.6 23.8	30.3 23.4 22.7	35.9 19.3 17.9	30.9 19.9 19.9
DesignQueue:	1 7 5	2 10 3	5 5 1	3 4 1

Walgreens
Existing
PM Peak Hour

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #3 Washington St. (NS) / Calle Tampico (EW)

Cycle (sec): 77 Critical Vol./Cap. (X): 0.387
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 27.1
Optimal Cycle: 77 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 20 20	10 20 20	10 25 25	10 25 25
Lanes:	1 0 2 0 1	1 0 2 0 1	1 0 1 0 1	1 0 0 1 0

Volume Module:	Base Vol.	Growth Adj.	Initial Bse.	Added Vol.	PasserByVol.	Initial Fut.	User Adj.	PHF Adj.	PHF Volume:	Reduced Vol.	Reduced Vol.	PCE Adj.	MLF Adj.	Final Vol.
	65 350 48	37 348 211	183 52 53	50 79 16										
	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00										
	65 350 48	37 348 211	183 52 53	50 79 16										
	0 15 0	4 16 4	4 0 0	0 0 0										
	0 0 0	0 0 0	0 0 0	0 0 0										
	65 365 48	41 364 215	187 52 53	50 79 20										
	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00										
	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00										
	65 365 48	41 364 215	187 52 53	50 79 20										
	0 0 0	0 0 0	0 0 0	0 0 0										
	65 365 48	41 364 215	187 52 53	50 79 20										
	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00										
	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00										
	65 365 48	41 364 215	187 52 53	50 79 20										

Saturation Flow Module:	Sat/Lane:	1900 1900	1900 1900	1900 1900	1900 1900	1900 1900	1900 1900	1900 1900	1900 1900
Adjustment:	0.95 0.95	0.85 0.95	0.95 0.95	0.85 0.95	1.00 0.85	0.95 0.97	0.97 0.97	0.97 0.97	0.97 0.97
Lanes:	1.00 2.00	1.00 1.00	2.00 1.00	1.00 1.00	1.00 1.00	1.00 0.80	0.80 0.20	0.20 0.20	0.20 0.20
Final Sat.:	1805 3610	1615 1805	3610 1615	1615 1805	1900 1615	1805 1471	372 1805	1471 372	372 1805

Capacity Analysis Module:	Vol/Sat:	0.04 0.10	0.03 0.02	0.10 0.13	0.10 0.03	0.03 0.03	0.03 0.05	0.05 0.05
Crit Moves:	****	****	****	****	****	****	****	****
Green/Cycle:	0.13 0.26	0.26 0.13	0.26 0.13	0.26 0.13	0.32 0.13	0.32 0.13	0.32 0.13	0.32 0.13
Volume/Cap:	0.28 0.39	0.11 0.17	0.39 0.11	0.17 0.39	0.51 0.80	0.08 0.10	0.21 0.17	0.17 0.21
Delay/Veh:	30.9 23.7	21.9 30.2	23.7 21.9	23.7 30.2	25.4 49.8	18.1 18.2	30.4 18.7	18.7 30.4
User DelAdj:	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00
AdjDel/Veh:	30.9 23.7	21.9 30.2	23.7 21.9	23.7 30.2	25.4 49.8	18.1 18.2	30.4 18.7	18.7 30.4
DesignQueue:	2 12	2 2	12 2	2 12	7 7	2 2	2 2	1 1

The Ranch
Existing
AM Peak Hour

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #1 Washington St. (NS) / Ave. 50 (EW)

Cycle (sec): 120 Critical Vol./Cap. (X): 0.701
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 34.0
Optimal Cycle: 120 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 20 20	10 20 20	10 20 20	10 20 20
Lanes:	1 0 1 1 0	1 0 1 0 1	1 0 1 0 1	1 0 0 1 0

Volume Module:	Base Vol.	Growth Adj.	Initial Bse.	User Adj.	PHF Adj.	PHF Volume:	Reduced Vol.	Reduced Vol.	PCE Adj.	MLF Adj.	Final Vol.
	21 803 38	172 801 78	43 71 25	53 122 179							
	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00							
	21 803 38	172 801 78	43 71 25	53 122 179							
	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00							
	21 803 38	172 801 78	43 71 25	53 122 179							
	0 0 0	0 0 0	0 0 0	0 0 0							
	21 803 38	172 801 78	43 71 25	53 122 179							
	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00							
	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00							
	21 803 38	172 801 78	43 71 25	53 122 179							

Saturation Flow Module:	Sat/Lane:	1900 1900	1900 1900	1900 1900	1900 1900	1900 1900	1900 1900	1900 1900	1900 1900
Adjustment:	0.95 0.94	0.94 0.95	1.00 0.85	0.85 0.95	1.00 0.85	0.95 0.91	0.91 0.91	0.91 0.91	0.91 0.91
Lanes:	1.00 1.91	0.09 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 0.41	0.59 1.00	0.41 0.59	0.59 1.00
Final Sat.:	1805 3423	162 1805	1900 1615	1805 1900	1615 1805	702 1805	1029 1805	1029 702	1029 1805

Capacity Analysis Module:	Vol/Sat:	0.01 0.23	0.23 0.10	0.42 0.05	0.02 0.04	0.02 0.03	0.17 0.17	0.17 0.17
Crit Moves:	****	****	****	****	****	****	****	****
Green/Cycle:	0.08 0.43	0.43 0.17	0.52 0.52	0.08 0.20	0.20 0.10	0.21 0.21	0.21 0.21	0.21 0.21
Volume/Cap:	0.14 0.55	0.55 0.55	0.81 0.09	0.29 0.19	0.08 0.30	0.81 0.81	0.81 0.81	0.81 0.81
Delay/Veh:	51.4 26.0	26.0 47.3	29.2 14.6	52.7 40.3	39.3 51.1	57.6 57.6	57.6 57.6	57.6 57.6
User DelAdj:	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00
AdjDel/Veh:	51.4 26.0	26.0 47.3	29.2 14.6	52.7 40.3	39.3 51.1	57.6 57.6	57.6 57.6	57.6 57.6
DesignQueue:	1 32	2 10	29 3	3 4	1 3	7 10	10 7	10 7

The Ranch
Existing
PM Peak Hour

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #1 Washington St. (NS) / Ave. 50 (EW)

Cycle (sec): 110 Critical Vol./Cap. (X): 0.544
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 37.3
Optimal Cycle: 110 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	20	20	10	20	20	10	20	20	10	20	20
Lanes:	1	0	1	1	0	1	1	0	1	1	0	1

Volume Module:

Base Vol:	27	559	30	165	632	106	47	62	33	73	53	135
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	27	559	30	165	632	106	47	62	33	73	53	135
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	27	559	30	165	632	106	47	62	33	73	53	135
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	559	30	165	632	106	47	62	33	73	53	135
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	27	559	30	165	632	106	47	62	33	73	53	135

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.89	0.89
Lanes:	1.00	1.90	0.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.28	0.72
Final Sat.:	1805	3399	182	1805	1900	1615	1805	1900	1615	1805	478	1217

Capacity Analysis Module:

Vol/Sat:	0.01	0.16	0.16	0.09	0.33	0.07	0.03	0.03	0.02	0.04	0.11	0.11
Crit Moves:	0.01	0.16	0.16	0.09	0.33	0.07	0.03	0.03	0.02	0.04	0.11	0.11
Green/Cycle:	0.09	0.18	0.18	0.44	0.53	0.53	0.09	0.18	0.18	0.09	0.18	0.18
Volume/Cap:	0.16	0.90	0.90	0.21	0.63	0.12	0.29	0.18	0.11	0.44	0.61	0.61
Delay/Veh:	46.6	60.2	60.2	19.4	19.7	13.2	47.6	38.3	37.8	49.3	45.0	45.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.6	60.2	60.2	19.4	19.7	13.2	47.6	38.3	37.8	49.3	45.0	45.0
DesignQueue:	2	29	2	6	20	3	3	3	2	4	3	7

The Ranch
Existing
AM Peak Hour

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #2 Washington St. (NS) / Ave. 52 (EW)

Cycle (sec): 87 Critical Vol./Cap. (X): 0.286
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 33.0
Optimal Cycle: 87 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	20	20	20	20	20	20	10	25	25	10	25	25
Lanes:	0	0	1	0	0	0	1	1	0	0	1	1

Volume Module:

Base Vol:	1	2	2	218	9	76	340	252	5	3	93	135
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	2	2	218	9	76	340	252	5	3	93	135
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	1	2	2	218	9	76	340	252	5	3	93	135
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1	2	2	218	9	76	340	252	5	3	93	135
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	1	2	2	218	9	76	340	252	5	3	93	135

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.84	0.84	0.84	0.95	0.95	0.85	0.92	0.95	0.85	0.95	0.95	0.85
Lanes:	0.20	0.40	0.40	1.92	0.08	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	318	637	637	3481	144	1615	3502	3610	1615	1805	3610	1615

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.06	0.06	0.05	0.10	0.07	0.00	0.00	0.03	0.08
Crit Moves:	0.00	0.00	0.00	0.06	0.06	0.05	0.10	0.07	0.00	0.00	0.03	0.08
Green/Cycle:	0.23	0.23	0.23	0.23	0.23	0.34	0.11	0.29	0.29	0.11	0.29	0.29
Volume/Cap:	0.01	0.01	0.01	0.27	0.27	0.14	0.84	0.24	0.01	0.01	0.09	0.29
Delay/Veh:	25.9	25.9	25.9	27.7	27.7	19.7	52.8	23.9	22.2	34.2	22.7	24.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.9	25.9	25.9	27.7	27.7	19.7	52.8	23.9	22.2	34.2	22.7	24.5
DesignQueue:	0	0	0	8	0	2	15	9	0	0	3	5

The Ranch
Existing
PM Peak Hour

Level of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #2 Washington St. (NS) / Ave. 52 (EW)

Cycle (sec): 120 Critical Vol./Cap. (X): 0.411
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 36.0
Optimal Cycle: 120 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Split Phase	Split Phase	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	20 20 20	20 20 20	10 25 25	10 25 25
Lanes:	0 0 1 0 0	1 1 0 0 1	2 0 2 0 1	1 0 2 0 1

Volume Module:

Base Vol:	2	9	3	93	1	388	178	137	3	6	215	114
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	9	3	93	1	388	178	137	3	6	215	114
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	9	3	93	1	388	178	137	3	6	215	114
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	9	3	93	1	388	178	137	3	6	215	114
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	2	9	3	93	1	388	178	137	3	6	215	114

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.86	0.86	0.86	0.95	0.95	0.85	0.92	0.95	0.85	0.95	0.95	0.85
Lanes:	0.14	0.65	0.21	1.98	0.02	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	235	1056	352	3583	39	1615	3502	3610	1615	1805	3610	1615

Capacity Analysis Module:

Vol/Sat:	0.01	0.01	0.01	0.03	0.03	0.24	0.05	0.04	0.00	0.00	0.06	0.07
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.17	0.17	0.17	0.43	0.43	0.43	0.09	0.21	0.21	0.09	0.21	0.21
Volume/Cap:	0.05	0.05	0.05	0.06	0.06	0.55	0.55	0.18	0.01	0.04	0.29	0.34
Delay/Veh:	42.1	42.1	42.1	19.8	19.8	26.3	54.3	38.6	37.1	50.4	40.2	41.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.1	42.1	42.1	19.8	19.8	26.3	54.3	38.6	37.1	50.4	40.2	41.1
DesignQueue:	0	1	0	4	0	15	11	7	0	0	12	6

City of La Quinta
Post 2020 General Plan Recommended Alternative
AM Peak Hour Conditions

Level of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #1 Washington St./Country Club Dr.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.836
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 48.7
Optimal Cycle: 100 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Ovl	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 3 1 0	1 0 4 0 1	2 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	115	1245	23	168	1281	577	1034	271	112	22	398	52
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	115	1245	23	168	1281	577	1034	271	112	22	398	52
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	115	1245	23	168	1281	577	1034	271	112	22	398	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	121	1311	24	177	1348	607	1088	285	118	23	419	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	121	1311	24	177	1348	607	1088	285	118	23	419	55
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	121	1311	24	177	1348	607	1088	285	118	23	419	55

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.91	0.85	0.92	0.91	0.91	0.95	0.93	0.93
Lanes:	1.00	3.93	0.07	1.00	4.00	1.00	2.00	1.41	0.59	1.00	1.77	0.23
Final Sat.:	1805	6771	124	1805	6916	1615	3502	2441	1011	1805	3137	412

Capacity Analysis Module:

Vol/Sat:	0.07	0.19	0.19	0.10	0.19	0.38	0.31	0.12	0.12	0.01	0.13	0.13
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.10	0.25	0.25	0.10	0.25	0.53	0.28	0.38	0.38	0.15	0.25	0.25
Volume/Cap:	0.67	0.77	0.77	0.98	0.78	0.71	1.11	0.31	0.31	0.08	0.53	0.53
Delay/Veh:	52.3	37.1	37.1	106.0	37.3	20.5	99.7	22.0	22.0	36.6	33.1	33.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	52.8	37.1	37.1	106.0	37.3	20.5	99.7	22.0	22.0	36.6	33.1	33.1
DesignQueue:	6	57	1	9	59	17	47	10	4	1	18	2

City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #2 Washington St./Hovley Ln.-42nd Ave.

Cycle (sec): 82 Critical Vol./Cap. (X): 0.749
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 34.9
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	2	1	0	2	1	0	1	1	1	0

Volume Module:

Base Vol:	187	1119	59	67	1236	115	202	382	196	58	360	86
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	187	1119	59	67	1236	115	202	382	196	58	360	86
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	187	1119	59	67	1236	115	202	382	196	58	360	86
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	197	1178	62	71	1301	121	213	402	206	61	379	91
Reduc Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	197	1178	62	71	1301	121	213	402	206	61	379	91
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	197	1178	62	71	1301	121	213	402	206	61	379	91

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.95	0.90	0.90	0.95	0.90	0.90	0.95	0.92	0.92
Lanes:	1.00	2.85	0.15	1.00	2.74	0.26	1.00	1.32	0.68	1.00	1.61	0.39
Final Sat:	1805	4893	258	1805	4684	436	1805	2265	1161	1805	2827	679

Capacity Analysis Module:

Vol/Sat:	0.11	0.24	0.24	0.04	0.28	0.28	0.12	0.18	0.18	0.03	0.13	0.13
Crit Moves:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30
Volume/Cap:	5.89	0.79	0.79	0.52	0.91	0.91	0.97	0.58	0.58	0.28	0.44	0.44
Delay/Veh:	69.3	28.9	28.9	33.8	35.8	35.8	87.1	24.9	24.9	33.4	23.2	23.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	69.3	28.9	28.9	33.8	35.8	35.8	87.1	24.9	24.9	33.4	23.2	23.2
DesignQueue:	8	40	2	3	44	4	9	13	7	2	12	3

City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #3 Washington St./Fred Waring Dr.

Cycle (sec): 85 Critical Vol./Cap. (X): 0.757
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 49.5
Optimal Cycle: 85 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	2	0	2	1	0	3	0	1	1	0	3	0

Volume Module:

Base Vol:	725	1016	45	34	1224	129	165	834	612	37	732	38
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Initial Bse:	725	1016	45	34	1224	129	165	834	0	37	732	38
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	725	1016	45	34	1224	129	165	834	0	37	732	38
User Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	689	965	43	32	1163	123	157	792	0	35	695	36
Reduc Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	689	965	43	32	1163	123	157	792	0	35	695	36
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol:	689	965	43	32	1163	123	157	792	0	35	695	36

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.90	0.90	0.95	0.91	0.85	0.95	0.91	1.00	0.95	0.90	0.90
Lanes:	2.00	2.87	0.13	1.00	3.00	1.00	1.00	3.00	1.00	1.00	2.85	0.15
Final Sat:	1502	4936	220	1805	5187	1615	1805	5187	1900	1805	4897	254

Capacity Analysis Module:

Vol/Sat:	0.20	0.20	0.20	0.02	0.22	0.08	0.09	0.15	0.00	0.02	0.14	0.14
Crit Moves:	0.15	0.32	0.32	0.13	0.29	0.29	0.12	0.29	0.00	0.12	0.29	0.29
Volume/Cap:	1.29	0.61	0.61	0.14	0.76	0.26	0.74	0.52	0.00	0.16	0.48	0.48
Delay/Veh:	178.6	25.2	25.2	33.2	29.6	23.2	49.1	25.3	0.0	34.1	24.9	24.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	178.6	25.2	25.2	33.2	29.6	23.2	49.1	25.3	0.0	34.1	24.9	24.9
DesignQueue:	29	33	1	1	41	4	7	27	0	1	24	1

City of La Quinta
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AM Peak Hour Conditions

Level of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #4: Washington St./Miles Ave.

Cycle (sec): 85 Critical Vol./Cap. (X): 0.560
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 45.2
Optimal Cycle: 85 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 2 1 0	2 0 2 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	20 1536	40 209 1655	6 5 267	28 38 197	198
Growth Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
Initial Bse:	20 1536	40 209 1655	6 5 267	28 38 197	198
Added Vol:	0 0 0	0 0 0	0 0 0	0 0 0	0
PasserByVol:	0 0 0	0 0 0	0 0 0	0 0 0	0
Initial Fut:	20 1536	40 209 1655	6 5 267	28 38 197	198
User Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
PHF Adj:	0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95
PHF Volume:	21 1617	42 220 1742	6 5 281	29 40 207	208
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0	0
Reduced Vol:	21 1617	42 220 1742	6 5 281	29 40 207	208
PCE Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
MLF Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
Final Vol:	21 1617	42 220 1742	6 5 281	29 40 207	208

Saturation Flow Module:

Sat/Lane:	1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 0.91	0.91 0.92 0.91	0.91 0.95 0.94	0.94 0.95 0.95
Lanes:	2.00 2.92	0.08 2.00 2.99	0.01 1.00 1.81	0.19 1.00 1.00
Final Sat:	3502 5035	131 3502 5169	18 1805 3226	333 1805 1805

Capacity Analysis Module:

Vol/Sat:	0.01 0.32	0.32 0.06 0.34	0.34 0.00 0.09	0.09 0.02 0.11	0.14
Crit Moves:	****	****	****	****	****
Green/Cycle:	0.12 0.33	0.33 0.12 0.33	0.33 0.12 0.29	0.29 0.12 0.29	0.29
Volume/Cap:	0.05 0.97	0.97 0.53 1.02	1.02 0.02 0.30	0.30 0.19 0.39	0.46
Delay/Veh:	33.3 44.3	44.3 36.7 56.3	56.3 33.2 23.4	23.4 34.3 24.2	24.9
User DelAdj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
AdjDel/Veh:	33.3 44.3	44.3 36.7 56.3	56.3 33.2 23.4	23.4 34.3 24.2	24.9
DesignQueue:	1 55	1 9 60	0 0 10	1 2 7	7

City of La Quinta
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AM Peak Hour Conditions

Level of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #5 Washington St./Hwy. 111.

Cycle (sec): 85 Critical Vol./Cap. (X): 0.807
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 41.3
Optimal Cycle: 85 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Ovl	Ovl
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 3 1 0	2 0 3 1 0	1 0 4 0 1	1 0 3 0 1

Volume Module:

Base Vol:	741 1020	14 439 1066	88 105 1185	784 8 991	446
Growth Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
Initial Bse:	741 1020	14 439 1066	88 105 1185	784 8 991	446
Added Vol:	0 0 0	0 0 0	0 0 0	0 0 0	0
PasserByVol:	0 0 0	0 0 0	0 0 0	0 0 0	0
Initial Fut:	741 1020	14 439 1066	88 105 1185	784 8 991	446
User Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
PHF Adj:	0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95
PHF Volume:	780 1074	15 462 1122	93 111 1247	825 8 1043	469
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0	0
Reduced Vol:	780 1074	15 462 1122	93 111 1247	825 8 1043	469
PCE Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
MLF Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
Final Vol:	780 1074	15 462 1122	93 111 1247	825 8 1043	469

Saturation Flow Module:

Sat/Lane:	1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 0.91	0.91 0.92 0.90	0.90 0.95 0.91	0.85 0.95 0.91
Lanes:	2.00 3.94	0.06 2.00 3.69	0.31 1.00 4.00	1.00 1.00 3.00
Final Sat:	3502 6807	95 3502 6310	523 1805 6916	1615 1805 5187

Capacity Analysis Module:

Vol/Sat:	0.22 0.16	0.16 0.13 0.18	0.18 0.06 0.18	0.51 0.00 0.20	0.29
Crit Moves:	****	****	****	****	****
Green/Cycle:	0.19 0.29	0.29 0.19 0.29	0.29 0.11 0.29	0.49 0.12 0.26	0.46
Volume/Cap:	0.14 0.54	0.54 0.68 0.60	0.60 0.58 0.61	1.04 0.04 0.76	0.63
Delay/Veh:	115.2 25.4	25.4 34.5 26.3	26.3 40.7 26.4	66.0 33.3 31.4	19.3
User DelAdj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
AdjDel/Veh:	115.2 25.4	25.4 34.5 26.3	26.3 40.7 26.4	66.0 33.3 31.4	19.3
DesignQueue:	31 37	1 18 39	3 5 43	22 0 38	13

Default Scenario	Tue Aug 29, 2000 17:02:37												Page 7-1	
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1997 HCM Operations Method (Future Volume Alternative)														

Intersection #6 Washington St./Eisenhower Dr.														

Cycle (sec):	97	Critical Vol./Cap. (X):										0.450		
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):										49.6		
Optimal Cycle:	97	Level Of Service:										D		

Approach:	North Bound			South Bound			East Bound			West Bound				
Movement:	L	T	R	L	T	R	L	T	R	L	T	R		

Control:	Protected			Protected			Split Phase			Split Phase				
Rights:	Include			Ovl			Include			Include				
Min. Green:	10	25	25	10	25	25	25	25	25	25	25	25		
Lanes:	1	0	3	1	0	3	0	1	0	0	0	1	0	0

Volume Module:														
Base Vol:	9	1468	14	48	1328	269	240	2	21	17	2	49		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Initial Bse:	9	1468	14	48	1328	269	240	2	21	17	2	49		
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0		
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0		
Initial Fut:	9	1468	14	48	1328	269	240	2	21	17	2	49		
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		
PHF Volume:	9	1545	15	51	1398	283	253	2	22	18	2	52		
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0		
Reduced Vol:	9	1545	15	51	1398	283	253	2	22	18	2	52		
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Final Vol:	9	1545	15	51	1398	283	253	2	22	18	2	52		

Saturation Flow Module:														
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Adjustment:	0.95	0.91	0.91	0.95	0.91	0.85	0.92	0.95	0.81	0.79	0.79	0.79		
Lanes:	1.00	3.96	0.04	1.00	3.00	1.00	2.00	1.00	1.00	0.25	0.03	0.72		
Final Sat:	1805	6843	66	1805	5187	1615	3502	1805	1534	377	42	1089		

Capacity Analysis Module:														
Vol/Sat:	0.00	0.23	0.23	0.03	0.27	0.18	0.07	0.00	0.01	0.05	0.05	0.05		
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****		
Green/Cycle:	0.10	0.26	0.26	0.10	0.26	0.52	0.26	0.26	0.26	0.26	0.26	0.26		
Volume/Cap:	1.05	0.88	0.88	0.27	1.05	0.34	0.28	0.00	0.06	0.19	0.19	0.19		
Delay/Veh:	39.3	39.8	39.8	41.0	73.5	14.1	29.0	26.8	27.2	28.3	28.3	28.3		
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
AdjDel/Veh:	39.3	39.8	39.8	41.0	73.5	14.1	29.0	26.8	27.2	28.3	28.3	28.3		
DesignQueue:	0	65	1	2	60	8	10		1	1	0			

Default Scenario		Tue Aug 29, 2000 17:02:37										Page 8-1	
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1997 HCM Operations Method (Future Volume Alternative)													
Intersection #7 Washington St./Ave. 50													
Cycle (sec):		90		Critical Vol./Cap. (X):								0.701	
Loss Time (sec):		12 (Y+R = 4 sec)		Average Delay (sec/veh):								42.4	
Optimal Cycle:		90		Level Of Service:								D	
Approach:		North Bound			South Bound			East Bound			West Bound		
Movement:		L - T - R			L - T - R			L - T - R			L - T - R		
Control:		Protected			Protected			Protected			Protected		
Rights:		Include			Ovl			Include			Ovl		
Min. Green:		10	25	25	10	25	25	10	25	25	10	25	25
Lanes:		1	0	3	0	1	2	0	3	0	1	2	0
Volume Module:													
Base Vol:		120	816	155	275	626	451	425	314	93	150	383	225
Growth Adj:		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:		120	816	155	275	626	451	425	314	93	150	383	225
Added Vol:		0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:		0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:		120	816	155	275	626	451	425	314	93	150	383	225
User Adj:		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:		0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:		126	859	163	289	659	475	447	331	98	158	403	237
Reduct Vol:		0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:		126	859	163	289	659	475	447	331	98	158	403	237
PCE Adj:		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:		126	859	163	289	659	475	447	331	98	158	403	237
Saturation Flow Module:													
Sat/Lane:		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:		0.95	0.91	0.85	0.92	0.91	0.85	0.95	0.95	0.85	0.95	0.95	0.85
Lanes:		1.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat:		1805	5187	1615	3502	5187	1615	1805	3610	1615	1805	3610	1615
Capacity Analysis Module:													
Vol/Sat:		0.07	0.17	0.10	0.08	0.13	0.29	0.25	0.09	0.06	0.09	0.11	0.15
Crit Moves:		****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:		0.11	0.28	0.28	0.11	0.28	0.48	0.20	0.34	0.34	0.14	0.28	0.39
Volume/Cap:		1.53	0.60	0.36	0.74	0.46	0.62	1.24	0.27	0.18	0.64	0.40	0.38
Delay/Veh:		44.4	28.8	26.6	46.3	27.1	18.9	164.8	21.6	20.9	42.4	26.7	20.1
User DelAdj:		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:		44.4	28.8	26.6	46.3	27.1	18.9	164.8	21.6	20.9	42.4	26.7	20.1
DesignQueue:		6	32	6	13	25	13	19	11	3	7	15	7

City of La Quinta
Post 2020 General Plan Recommended Alternative
AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #8 Jefferson St./Country Club Dr.

Cycle (sec): 85 Critical Vol./Cap. (X): 0.653
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 50.5
Optimal Cycle: 82 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Ignore Include Include
Min. Green: 10 25 25 0 25 25 10 25 25 10 25 0
Lanes: 2 0 2 1 0 1 0 2 0 1 0 1 0 0 1 0

Volume Module:
Base Vol: 280 971 127 0 560 533 629 86 302 107 225 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 250 971 127 0 560 0 629 86 302 107 225 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 280 971 127 0 560 0 629 86 302 107 225 0
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 295 1022 134 0 589 0 662 91 318 113 237 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 295 1022 134 0 589 0 662 91 318 113 237 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol: 295 1022 134 0 589 0 662 91 318 113 237 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 0.89 0.89 1.00 0.95 1.00 0.92 1.00 0.85 0.95 1.00 1.00
Lanes: 2.00 2.65 0.35 1.00 2.00 1.00 2.00 1.00 1.00 1.00 1.00 0.00
Final Sat: 1802 4508 591 1900 3610 1900 3502 1900 1615 1805 1900 0

Capacity Analysis Module:
Vol/Sat: 0.28 0.23 0.23 0.00 0.16 0.00 0.19 0.05 0.20 0.06 0.12 0.00
Crit Moves: ****
Green/Cycle: 0.12 0.41 0.41 0.00 0.29 0.00 0.15 0.32 0.32 0.13 0.29 0.00
Volume/Cap: 0.72 0.55 0.55 0.00 0.55 0.00 1.24 0.15 0.62 0.49 0.42 0.00
Delay/Veh: 42.1 19.3 19.3 0.0 26.0 0.0 157.6 20.8 26.8 36.1 24.7 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 42.1 19.3 19.3 0.0 26.0 0.0 157.6 20.8 26.8 36.1 24.7 0.0
DesignQueue: 13 30 4 0 20 0 28 3 11 5 8 0

City of La Quinta
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AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #9 Jefferson St./Ave. 44

Cycle (sec): 82 Critical Vol./Cap. (X): 0.669
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 30.6
Optimal Cycle: 82 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 10 25 25 0 25 25 10 25 25 10 25 0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 2 0 1

Volume Module:
Base Vol: 64 1163 60 0 823 148 239 576 123 112 661 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 64 1163 60 0 823 148 239 576 123 112 661 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 64 1163 60 0 823 148 239 576 123 112 661 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 67 1224 63 0 866 156 252 606 129 118 696 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 67 1224 63 0 866 156 252 606 129 118 696 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol: 67 1224 63 0 866 156 252 606 129 118 696 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.90 0.90 1.00 0.89 0.89 0.95 0.95 0.85 0.95 0.95 1.00
Lanes: 1.00 2.85 0.15 1.00 2.54 0.46 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat: 1805 4899 252 1900 4294 774 1805 3610 1615 1805 3610 1900

Capacity Analysis Module:
Vol/Sat: 0.34 0.25 0.25 0.00 0.20 0.20 0.14 0.17 0.08 0.07 0.19 0.00
Crit Moves: ****
Green/Cycle: 0.12 0.43 0.43 0.00 0.30 0.30 0.12 0.30 0.30 0.12 0.30 0.00
Volume/Cap: 0.30 0.59 0.59 0.00 0.66 0.66 1.14 0.55 0.26 0.54 0.63 0.00
Delay/Veh: 33.6 18.4 18.4 0.0 25.9 25.9 141.2 24.4 21.8 36.4 25.7 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 33.6 18.4 18.4 0.0 25.9 25.9 141.2 24.4 21.8 36.4 25.7 0.0
DesignQueue: 3 34 2 0 29 5 10 20 4 5 23 0

City of La Quinta
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AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #10 Jefferson St./Miles Ave.

Cycle (sec): 82 Critical Vol./Cap. (X): 0.597
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 27.2
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Ignore
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 1 0 1	1 0 1 0 1

Volume Module:

Base Vol:	40 978 14	85 890 83	159 318 54	16 299 151
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	40 978 14	85 890 83	159 318 54	16 299 0
Added Vol:	0 0 0	0 0 0	0 0 0	0 0 0
PasserByVol:	0 0 0	0 0 0	0 0 0	0 0 0
Initial Fut:	40 978 14	85 890 83	159 318 54	16 299 0
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	42 1029 15	89 937 87	167 335 57	17 315 0
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	42 1029 15	89 937 87	167 335 57	17 315 0
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	42 1029 15	89 937 87	167 335 57	17 315 0

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.91 0.91	0.95 0.90 0.90	0.95 1.00 0.85	0.95 1.00 1.00
Lanes:	1.00 2.96 0.04	1.00 2.75 0.25	1.00 1.00 1.00	1.00 1.00 1.00
Final Sat:	1805 5102 74	1805 4685 435	1805 1900 1615	1805 1900 1900

Capacity Analysis Module:

Vol/Sat:	0.02 0.20 0.20	0.05 0.20 0.20	0.09 0.18 0.04	0.01 0.17 0.00
Crit Moves:	****	****	****	****
Green/Cycle:	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.00
Volume/Cap:	0.19 0.66 0.66	0.40 0.66 0.66	0.76 0.58 0.12	0.08 0.54 0.00
Delay/Veh:	32.8 25.9 25.9	34.5 25.8 25.8	49.0 25.5 20.6	32.1 24.8 0.0
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	32.8 25.9 25.9	34.5 25.8 25.8	49.0 25.5 20.6	32.1 24.8 0.0
DesignQueue:	2 34 1	4 31 3	7 11 2	1 10 0

City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #11 Jefferson St./Hwy. 111

Cycle (sec): 82 Critical Vol./Cap. (X): 0.689
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 28.3
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 3 0 1	2 0 3 0 1	2 0 3 0 1	2 0 3 0 1

Volume Module:

Base Vol:	32 668 344	177 672 110	123 1064 26	317 1246 189
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	32 668 344	177 672 110	123 1064 26	317 1246 189
Added Vol:	0 0 0	0 0 0	0 0 0	0 0 0
PasserByVol:	0 0 0	0 0 0	0 0 0	0 0 0
Initial Fut:	32 668 344	177 672 110	123 1064 26	317 1246 189
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	34 703 362	186 707 116	129 1120 27	334 1312 199
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	34 703 362	186 707 116	129 1120 27	334 1312 199
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	34 703 362	186 707 116	129 1120 27	334 1312 199

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 0.91 0.85	0.92 0.91 0.85	0.92 0.91 0.85	0.92 0.91 0.85
Lanes:	2.00 3.00 1.00	2.00 3.00 1.00	2.00 3.00 1.00	2.00 3.00 1.00
Final Sat:	3502 5187 1615	3502 5187 1615	3502 5187 1615	3502 5187 1615

Capacity Analysis Module:

Vol/Sat:	0.01 0.14 0.22	0.05 0.14 0.07	0.04 0.22 0.02	0.10 0.25 0.12
Crit Moves:	****	****	****	****
Green/Cycle:	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30
Volume/Cap:	0.38 0.44 0.74	0.44 0.45 0.24	0.30 0.71 0.05	0.78 0.83 0.40
Delay/Veh:	32.0 23.1 31.2	34.1 23.1 21.6	33.2 26.8 20.2	44.0 30.4 23.1
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	32.0 23.1 31.2	34.1 23.1 21.6	33.2 26.8 20.2	44.0 30.4 23.1
DesignQueue:	1 23 12	8 23 4	5 37 1	14 44 6

City of La Quinta
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AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #12 Jefferson St./Ave. 48

Cycle (sec): 85 Critical Vol./Cap. (X): 0.838
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 46.7
Optimal Cycle: 85 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R

Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Ovl	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 2 1 0	1 0 2 1 0	1 0 2 0 1	2 0 1 1 0

Volume Module:

Base Vol:	621	873	25	40	896	116	200	632	368	83	684	22
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	621	873	25	40	896	116	200	632	368	83	684	22
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	621	873	25	40	896	116	200	632	368	83	684	22
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	654	919	26	42	943	122	211	665	387	87	720	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	654	919	26	42	943	122	211	665	387	87	720	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	654	919	26	42	943	122	211	665	387	87	720	23

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.91	0.95	0.89	0.89	0.95	0.95	0.85	0.92	0.95	0.95
Lanes:	2.00	2.92	0.08	1.00	2.66	0.34	1.00	2.00	1.00	2.00	1.94	0.06
Final Sat:	3502	5924	142	1805	4515	584	1805	3610	1615	3502	3481	111

Capacity Analysis Module:

Vol/Sat:	0.19	0.18	0.18	0.02	0.21	0.21	0.12	0.18	0.24	0.02	0.21	0.21
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.15	0.32	0.32	0.13	0.29	0.29	0.12	0.29	0.45	0.12	0.29	0.29
Volume/Cap:	1.22	0.57	0.37	0.18	0.71	0.71	0.99	0.63	0.54	0.21	0.70	0.70
Delay/Veh:	151.5	24.6	24.6	33.5	28.4	28.4	97.3	27.1	17.9	34.2	28.9	28.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	151.5	24.6	24.6	33.5	28.4	28.4	97.3	27.1	17.9	34.2	28.9	28.9
DesignQueue:	27	31	1	2	33	4	9	23	11	4	25	1

City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #13 Jefferson St./Ave. 50

Cycle (sec): 97 Critical Vol./Cap. (X): 0.511
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 30.5
Optimal Cycle: 97 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R

Control:	Protected	Protected	Split Phase	Split Phase
Rights:	Include	Ovl	Include	Include
Min. Green:	10 25 25	10 25 25	25 25 25	25 25 25
Lanes:	2 0 3 0 1	2 0 3 0 1	1 1 1 0 1	1 1 1 0 1

Volume Module:

Base Vol:	71	786	31	107	717	384	316	365	45	45	413	240
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	71	786	31	107	717	384	316	365	45	45	413	240
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	71	786	31	107	717	384	316	365	45	45	413	240
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	75	827	33	113	755	404	333	384	47	47	435	253
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	75	827	33	113	755	404	333	384	47	47	435	253
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	75	827	33	113	755	404	333	384	47	47	435	253

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.85	0.92	0.91	0.85	0.90	0.95	0.85	0.90	0.95	0.85
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.43	1.57	1.00	1.00	2.00	1.00
Final Sat:	3502	5187	1615	3502	5187	1615	2455	2831	1615	1715	3610	1615

Capacity Analysis Module:

Vol/Sat:	0.02	0.16	0.02	0.03	0.15	0.25	0.14	0.14	0.03	0.03	0.12	0.16
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.10	0.26	0.26	0.10	0.26	0.52	0.26	0.26	0.26	0.26	0.26	0.26
Volume/Cap:	0.21	0.62	0.08	0.31	0.56	0.49	0.53	0.53	0.11	0.11	0.47	0.61
Delay/Veh:	40.3	32.7	27.4	40.8	31.8	15.6	31.3	31.3	27.6	27.5	30.7	34.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.2	32.7	27.4	40.8	31.8	15.6	31.3	31.3	27.6	27.5	30.7	34.3
DesignQueue:	4	34	1	6	31	11	14	16	2	2	18	10

Default Scenario	Tue Aug 29, 2000 17:02:37										Page 16-1
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1997 HCM Operations Method (Future Volume Alternative)											
Intersection #15 Madison St. Ave. 50											
Cycle (sec):	82			Critical Vol./Cap. (X):						0.811	
Loss Time (sec):	12 (Y+R = 4 sec)			Average Delay (sec/veh):						40.1	
Optimal Cycle:	82			Level Of Service:						D	
Approach: North Bound South Bound East Bound West Bound											
Movement: L - T - R L - T - R L - T - R L - T - R											
Control: Protected Protected Protected Protected											
Rights: Include Include Include Include											
Min. Green: 10 25 25 10 25 25 10 25 25 10 25 25											
Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1 1 0											
Volume Module:											
Base Vol: 50 966 80 192 719 43 82 365 20 82 525 211											
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00											
Initial Bse: 50 966 80 192 719 43 82 365 20 82 525 211											
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0											
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0											
Initial Fut: 50 966 80 192 719 43 82 365 20 82 525 211											
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00											
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95											
PHF Volume: 53 1017 84 202 757 45 86 384 21 86 553 222											
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0											
Reduced Vol: 53 1017 84 202 757 45 86 384 21 86 553 222											
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00											
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00											
Final Vol.: 53 1017 84 202 757 45 86 384 21 86 553 222											
Saturation Flow Module:											
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900											
Adjustment: 0.95 0.94 0.94 0.95 0.94 0.94 0.95 0.94 0.94 0.95 0.91 0.91											
Lanes: 1.00 1.85 0.15 1.00 1.89 0.11 1.00 1.90 0.10 1.00 1.43 0.57											
Final Sat: 1805 3298 272 1805 3380 201 1805 3395 186 1805 2465 990											
Capacity Analysis Module:											
Vol/Sat: 0.03 0.31 0.31 0.11 0.22 0.22 0.05 0.11 0.11 0.05 0.22 0.22											
Crit Moves: **** **** **** ****											
Green/Cycle: 0.12 0.30 0.30 0.12 0.30 0.30 0.12 0.30 0.30 0.12 0.30 0.30											
Volume/Cap: 1.24 1.01 1.01 0.92 0.73 0.73 0.39 0.37 0.37 0.39 0.74 0.74											
Delay/Veh: 13.1 58.6 58.6 74.3 28.2 28.2 34.3 22.6 22.6 34.3 28.3 28.3											
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00											
AdjDel/Veh: 13.1 58.6 58.6 74.3 28.2 28.2 34.3 22.6 22.6 34.3 28.3 28.3											
DesignQueue: 2 35 3 8 25 2 3 13 1 3 19 7											

Default Scenario	Tue Aug 29, 2000 17:02:37										Page 17-1
City of La Quinta											
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1997 HCM Operations Method (Future Volume Alternative)											
Intersection #16 Madison St./Ave. 52											
Cycle (sec):	82	Critical Vol./Cap. (X):								0.796	
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):								38.5	
Optimal Cycle:	82	Level Of Service:								D	
Approach:	North Bound			South Bound			East Bound			West Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	
Control:	Protected			Protected			Protected			Protected	
Rights:	Include			Include			Include			Include	
Min. Green:	10	25	25	10	25	25	10	25	25	10	25
Lanes:	1	0	1	1	0	1	0	1	1	0	1
Volume Module:											
Base Vol:	176	647	21	215	496	85	115	443	156	28	661
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	176	647	21	215	496	85	115	443	156	28	661
Added Vol:	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	176	647	21	215	496	85	115	443	156	28	661
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	185	681	22	226	522	89	121	466	164	29	696
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	185	681	22	226	522	89	121	466	164	29	696
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	185	681	22	226	522	89	121	466	164	29	696
Saturation Flow Module:											
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.93	0.93	0.95	0.91	0.91	0.95	0.91
Lanes:	1.00	1.94	0.06	1.00	1.71	0.29	1.00	1.48	0.52	1.00	1.39
Final Sat:	1805	3480	112	1805	3016	514	1805	2566	903	1805	2390
Capacity Analysis Module:											
Vol/Sat:	0.10	0.20	0.20	0.13	0.17	0.17	0.07	0.18	0.18	0.02	0.29
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30
Volume/Cap:	1.94	0.64	0.64	1.03	0.57	0.57	0.55	0.60	0.60	0.13	0.96
Delay/Veh:	59.3	25.9	25.9	103.8	24.7	24.7	36.8	25.1	25.1	32.4	45.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	59.3	25.9	25.9	103.8	24.7	24.7	36.8	25.1	25.1	32.4	45.9
DesignQueue:	8	23	1	9	17	3	5	15	5	1	24

City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #17 Jackson St./Airport Blvd.

Cycle (sec): 82 Critical Vol./Cap. (X): 0.767
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 46.6
Optimal Cycle: 82 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	53 434 223	275 135 41	52 589 20	75 433 401
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	53 434 223	275 135 41	52 589 20	75 433 401
Added Vol:	0 0 0	0 0 0	0 0 0	0 0 0
PasserByVol:	0 0 0	0 0 0	0 0 0	0 0 0
Initial Fut:	53 434 223	275 135 41	52 589 20	75 433 401
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	56 457 235	289 142 43	55 620 21	79 456 422
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	56 457 235	289 142 43	55 620 21	79 456 422
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	56 457 235	289 142 43	55 620 21	79 456 422

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.90 0.90	0.95 0.92 0.92	0.95 0.95 0.95	0.95 0.88 0.88
Lanes:	1.00 1.32 0.68	1.00 1.54 0.46	1.00 1.93 0.07	1.00 1.04 0.96
Final Sat:	1805 2262 1163	1805 2674 810	1805 3474 118	1805 1740 1610

Capacity Analysis Module:

Vol/Sat:	0.03 0.20 0.20	0.16 0.05 0.05	0.03 0.18 0.18	0.04 0.26 0.26
Crit Moves:	****	****	****	****
Green/Cycle:	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30
Volume/Cap:	0.24 0.66 0.66	1.31 0.17 0.17	0.25 0.59 0.59	0.36 0.86 0.86
Delay/Veh:	33.2 26.4 26.4	205.3 21.0 21.0	33.2 24.9 24.9	34.1 34.3 34.3
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	33.2 26.4 26.4	205.3 21.0 21.0	33.2 24.9 24.9	34.1 34.3 34.3
DesignQueue:	2 15 8	12 5 1	2 21 1	3 15 14

City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #18 Harrison St./Airport Blvd.

Cycle (sec): 82 Critical Vol./Cap. (X): 0.625
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 39.8
Optimal Cycle: 82 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	49 1266 159	22 999 190	234 729 74	103 306 3
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	49 1266 159	22 999 190	234 729 74	103 306 3
Added Vol:	0 0 0	0 0 0	0 0 0	0 0 0
PasserByVol:	0 0 0	0 0 0	0 0 0	0 0 0
Initial Fut:	49 1266 159	22 999 190	234 729 74	103 306 3
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	52 1333 167	23 1052 200	246 767 78	108 322 3
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	52 1333 167	23 1052 200	246 767 78	108 322 3
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	52 1333 167	23 1052 200	246 767 78	108 322 3

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.89 0.89	0.95 0.89 0.89	0.95 0.94 0.94	0.95 0.95 0.95
Lanes:	1.00 2.67 0.33	1.00 2.52 0.48	1.00 1.82 0.18	1.00 1.98 0.02
Final Sat:	1805 4531 568	1805 4254 809	1805 3231 329	1805 3573 33

Capacity Analysis Module:

Vol/Sat:	0.03 0.29 0.29	0.01 0.25 0.25	0.14 0.24 0.24	0.06 0.09 0.09
Crit Moves:	****	****	****	****
Green/Cycle:	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30
Volume/Cap:	0.24 0.96 0.96	0.10 0.81 0.81	1.12 0.78 0.78	0.49 0.30 0.30
Delay/Veh:	33.1 43.3 43.3	32.2 29.7 29.7	131.8 29.6 29.6	35.3 21.9 21.9
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	33.1 43.3 43.3	32.2 29.7 29.7	131.8 29.6 29.6	35.3 21.9 21.9
DesignQueue:	2 45 6	1 35 7	10 26 3	4 10 0

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Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #19 Grapefruit Blvd./Airport Blvd.

Cycle (sec): 85 Critical Vol./Cap. (X): 0.802
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 45.9
Optimal Cycle: 85 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	2	0	1	1	0	1	1	0	1	2	0	2

Volume Module:

Base Vol:	208	595	381	33	621	184	204	709	310	552	845	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	208	595	381	33	621	184	204	709	310	552	845	90
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	208	595	381	33	621	184	204	709	310	552	845	90
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	219	626	401	35	654	194	215	746	326	581	889	95
Reduc Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	219	626	401	35	654	194	215	746	326	581	889	95
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	219	626	401	35	654	194	215	746	326	581	889	95

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.89	0.89	0.95	0.92	0.92	0.95	0.91	0.85	0.92	0.90	0.90
Lanes:	2.00	1.22	0.78	1.00	1.54	0.46	1.00	3.00	1.00	2.00	2.71	0.29
Final Sat:	3502	2073	1328	1805	2689	798	1805	5187	1615	3502	4616	493

Capacity Analysis Module:

Vol/Sat:	0.06	0.30	0.30	0.02	0.24	0.24	0.12	0.14	0.20	0.17	0.19	0.19
Crit Moves:	***	***	***	***	***	***	***	***	***	***	***	***
Green/Cycle:	0.12	0.29	0.29	0.12	0.29	0.29	0.15	0.29	0.29	0.15	0.29	0.29
Volume/Cap:	0.53	1.03	1.03	0.16	0.83	0.83	0.78	0.49	0.69	1.08	0.65	0.65
Delay/Veh:	36.6	65.5	65.5	34.1	33.6	33.6	47.8	25.0	30.7	99.9	27.3	27.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.6	65.5	65.5	34.1	33.6	33.6	47.8	25.0	30.7	99.9	27.3	27.3
DesignQueue:	9	22	14	1	23	7	9	26	11	24	31	3

City of La Quinta
Post 2020 General Plan Recommended Alternative
AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #20 Grapefruit Blvd./Ave. 62

Cycle (sec): 82 Critical Vol./Cap. (X): 0.484
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 50.3
Optimal Cycle: 82 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	1	1	0	1	1	0	1	1	0	1

Volume Module:

Base Vol:	152	443	62	58	227	31	69	81	111	263	69	135
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	152	443	62	58	227	31	69	81	111	263	69	135
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	152	443	62	58	227	31	69	81	111	263	69	135
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	160	466	65	61	239	33	73	85	117	277	73	142
Reduc Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	160	466	65	61	239	33	73	85	117	277	73	142
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	160	466	65	61	239	33	73	85	117	277	73	142

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.93	0.93	0.95	0.95	0.81	0.95	0.95	0.81
Lanes:	1.00	1.76	0.24	1.00	1.76	0.24	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat:	1805	3111	434	1805	3115	430	1805	1805	1534	1805	1805	1534

Capacity Analysis Module:

Vol/Sat:	0.09	0.15	0.15	0.03	0.08	0.08	0.04	0.05	0.08	0.15	0.04	0.09
Crit Moves:	***	***	***	***	***	***	***	***	***	***	***	***
Green/Cycle:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30
Volume/Cap:	0.73	0.49	0.49	0.28	0.25	0.25	0.33	0.15	0.25	1.26	0.13	0.30
Delay/Veh:	46.2	23.7	23.7	33.4	21.6	21.6	33.8	20.8	21.6	183.6	20.7	22.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.2	23.7	23.7	33.4	21.6	21.6	33.8	20.8	21.6	183.6	20.7	22.1
DesignQueue:	7	15	2	2	8	1	3	3	4	12	2	5

City of La Quinta
Post 2020 General Plan Recommended Alternative
PM Peak Hour Conditions

Scenario Report
Scenario: Default Scenario

Command: Default Command
Volume: Default Volume
Geometry: Default Geometry
Impact Fee: Default Impact Fee
Trip Generation: Default Trip Generation
Trip Distribution: Default Trip Distribution
Paths: Default Paths
Routes: Default Routes
Configuration: Default Configuration

City of La Quinta
Post 2020 General Plan Recommended Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #1 Washington St./Country Club Dr.

Cycle (sec): 120 Critical Vol./Cap. (X): 0.923
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 49.4
Optimal Cycle: 120 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Include				Include			
Min. Green:	10	25	25		10	25	25		10	25	25		10	25	25	
Lanes:	1	0	3	1	0	1	0	4	0	1	2	0	1	1	0	

Volume Module:

Base Vol:	162	1395	25	70	1622	922	1011	378	135	24	411	43
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	162	1395	25	70	1622	922	1011	378	135	24	411	43
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	162	1395	25	70	1622	922	1011	378	135	24	411	43
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	171	1468	26	74	1707	971	1064	398	142	25	433	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	171	1468	26	74	1707	971	1064	398	142	25	433	45
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	171	1468	26	74	1707	971	1064	398	142	25	433	45

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.91	0.85	0.92	0.91	0.91	0.95	0.94	0.94
Lanes:	1.00	3.93	0.07	1.00	4.00	1.00	2.00	1.47	0.53	1.00	1.81	0.19
Final Sat:	1805	6775	120	1805	6916	1615	3502	2557	912	1805	3224	335

Capacity Analysis Module:

Vol/Sat:	0.09	0.22	0.22	0.04	0.25	0.60	0.30	0.16	0.16	0.01	0.13	0.13
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.09	0.31	0.31	0.08	0.30	0.60	0.30	0.36	0.36	0.15	0.21	0.21
Volume/Cap:	1.01	0.71	0.71	0.49	0.84	1.01	1.01	0.43	0.43	0.03	0.64	0.64
Delay/Veh:	125.0	38.0	38.0	55.1	42.7	54.6	71.1	28.9	28.9	44.6	45.4	45.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	125.0	38.0	38.0	55.1	42.7	54.6	71.1	28.9	28.9	44.6	45.4	45.4
DesignQueue:	11	72	1	5	85	30	53	18	6	1	24	2

City of La Quinta
Post 2020 General Plan Recommended Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #2 Washington St./Hovley Ln.-42nd Ave.

Cycle (sec): 120 Critical Vol./Cap. (X): 0.957
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 51.2
Optimal Cycle: 120 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	2	1	0	2	1	0	2	1	0	2

Volume Module:

Base Vol:	220	1284	81	170	1493	159	186	674	195	72	812	142
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	220	1284	81	170	1493	159	186	674	195	72	812	142
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	220	1284	81	170	1493	159	186	674	195	72	812	142
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	212	1352	85	179	1572	167	196	709	205	76	855	149
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	212	1352	85	179	1572	167	196	709	205	76	855	149
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	212	1352	85	179	1572	167	196	709	205	76	855	149

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.95	0.90	0.90	0.95	0.92	0.92	0.95	0.93	0.93
Lanes:	1.00	2.82	0.18	1.00	2.71	0.29	1.00	1.35	0.45	1.00	1.70	0.30
Final Sat:	1805	4836	304	1805	4623	491	1805	2705	782	1805	3007	524

Capacity Analysis Module:

Vol/Sat:	0.13	0.28	0.28	0.10	0.34	0.34	0.11	0.26	0.26	0.04	0.28	0.28
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.13	0.36	0.36	0.13	0.36	0.36	0.11	0.33	0.33	0.08	0.30	0.30
Volume/Cap:	1.96	0.77	0.77	0.77	0.96	0.96	0.96	0.50	0.80	0.51	0.96	0.96
Delay/Veh:	57.4	36.1	36.1	65.5	50.3	50.3	103.5	40.9	40.9	55.4	59.8	59.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.4	36.1	36.1	65.5	50.3	50.3	103.5	40.9	40.9	55.4	59.8	59.8
DesignQueue:	14	62	4	11	73	8	12	34	10	5	43	7

City of La Quinta
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PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #3 Washington St./Fred Waring Dr.

Cycle (sec): 120 Critical Vol./Cap. (X): 0.930
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 46.8
Optimal Cycle: 120 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	2	0	2	1	0	3	0	1	1	0	3	0

Volume Module:

Base Vol:	969	1469	47	47	1368	181	150	1151	1276	53	1276	51
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	969	1469	47	47	1368	181	150	1151	1276	53	1276	51
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	969	1469	47	47	1368	181	150	1151	1276	53	1276	51
User Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	921	1396	45	45	1300	172	143	1093	1276	50	1212	48
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	921	1396	45	45	1300	172	143	1093	1276	50	1212	48
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	921	1396	45	45	1300	172	143	1093	1276	50	1212	48

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.91	0.95	0.91	0.85	0.95	0.91	1.00	0.95	0.90	0.90
Lanes:	2.00	2.91	0.09	1.00	3.00	1.00	1.00	3.00	1.00	1.00	2.89	0.11
Final Sat:	1502	5000	161	1805	5187	1615	1805	5187	1900	1805	4959	196

Capacity Analysis Module:

Vol/Sat:	0.26	0.28	0.28	0.02	0.25	0.11	0.08	0.21	0.00	0.03	0.24	0.24
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.28	0.47	0.47	0.08	0.27	0.27	0.09	0.26	0.00	0.08	0.26	0.26
Volume/Cap:	1.93	0.60	0.60	0.30	0.93	0.40	0.93	0.80	0.00	0.33	0.93	0.93
Delay/Veh:	55.6	23.9	23.9	52.8	54.0	36.4	106.7	44.5	0.0	53.2	54.7	54.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.6	23.9	23.9	52.8	54.0	36.4	106.7	44.5	0.0	53.2	54.7	54.7
DesignQueue:	47	53	2	3	67	9	9	56	0	3	63	3

City of La Quinta
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PM Peak Hour Conditions

Level Of Service Computation Report

1997 HCM Operations Method (Future Volume Alternative)

Intersection #4 Washington St./Miles Ave.

Cycle (sec): 120 Critical Vol./Cap. (X): 0.917
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 50.7
Optimal Cycle: 120 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 2 1 0	2 0 2 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	261 2227	109 160 2298	3 21 242 234	43 513 230
Growth Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	261 2227	109 160 2298	3 21 242 234	43 513 230
Added Vol:	0 0 0	0 0 0	0 0 0	0 0 0
PasserByVol:	0 0 0	0 0 0	0 0 0	0 0 0
Initial Fut:	261 2227	109 160 2298	3 21 242 234	43 513 230
User Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	275 2344	115 379 2419	3 22 255 246	45 540 242
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	275 2344	115 379 2419	3 22 255 246	45 540 242
PCE Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	275 2344	115 379 2419	3 22 255 246	45 540 242

Saturation Flow Module:

Sat/Lane:	1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 0.90	0.91 0.92 0.91	0.95 0.88 0.88	0.95 0.91 0.91
Lanes:	2.00 2.86	0.14 2.00 2.99	0.01 1.00 1.02	0.98 1.00 1.38
Final Sat:	3502 4910	241 3502 5181	6 1805 1701	1641 1805 2378

Capacity Analysis Module:

Vol/Sat:	0.08 0.48	0.48 0.11 0.47	0.47 0.01 0.15	0.15 0.02 0.23
Crit Moves:	0.08 0.48	0.48 0.11 0.51	0.51 0.08 0.22	0.22 0.09 0.23
Green/Cycle:	0.08 0.48	0.48 0.11 0.51	0.51 0.08 0.22	0.22 0.09 0.23
Volume/Cap:	0.08 0.48	0.48 0.11 0.51	0.51 0.08 0.22	0.22 0.09 0.23
Delay/Veh:	32.2 48.0	48.0 98.2 33.8	33.8 51.5 45.1	45.1 52.0 77.1
User DelAdj:	32.2 48.0	48.0 98.2 33.8	33.8 51.5 45.1	45.1 52.0 77.1
AdjDel/Veh:	32.2 48.0	48.0 98.2 33.8	33.8 51.5 45.1	45.1 52.0 77.1
DesignQueue:	17 92	5 23 90	0 1 14	13 3 29

City of La Quinta
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Level Of Service Computation Report

1997 HCM Operations Method (Future Volume Alternative)

Intersection #5 Washington St./Hwy. 111.

Cycle (sec): 120 Critical Vol./Cap. (X): 0.872
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 48.6
Optimal Cycle: 120 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Ovl	Ovl
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 3 1 0	2 0 3 1 0	1 0 4 0 1	1 0 3 0 1

Volume Module:

Base Vol:	828 1638	15 654 1684	121 167 958	763 17 1088
Growth Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	828 1638	15 654 1684	121 167 958	763 17 1088
Added Vol:	0 0 0	0 0 0	0 0 0	0 0 0
PasserByVol:	0 0 0	0 0 0	0 0 0	0 0 0
Initial Fut:	828 1638	15 654 1684	121 167 958	763 17 1088
User Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	872 1724	16 688 1773	127 176 1008	803 18 1145
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	872 1724	16 688 1773	127 176 1008	803 18 1145
PCE Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	872 1724	16 688 1773	127 176 1008	803 18 1145

Saturation Flow Module:

Sat/Lane:	1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 0.91	0.91 0.92 0.90	0.90 0.95 0.91	0.85 0.95 0.91
Lanes:	2.00 3.96	0.04 2.00 3.73	0.27 1.00 4.00	1.00 1.00 3.00
Final Sat:	3502 6846	64 3502 6389	458 1805 6916	1615 1805 5187

Capacity Analysis Module:

Vol/Sat:	0.25 0.25	0.25 0.20 0.28	0.28 0.10 0.15	0.50 0.01 0.22
Crit Moves:	0.25 0.25	0.25 0.20 0.28	0.28 0.10 0.15	0.50 0.01 0.22
Green/Cycle:	0.26 0.31	0.31 0.24 0.29	0.29 0.11 0.26	0.52 0.08 0.24
Volume/Cap:	0.26 0.31	0.31 0.24 0.29	0.29 0.11 0.26	0.52 0.08 0.24
Delay/Veh:	61.9 40.3	40.3 48.5 52.0	52.0 96.9 38.7	46.6 51.3 56.0
User DelAdj:	61.9 40.3	40.3 48.5 52.0	52.0 96.9 38.7	46.6 51.3 56.0
AdjDel/Veh:	61.9 40.3	40.3 48.5 52.0	52.0 96.9 38.7	46.6 51.3 56.0
DesignQueue:	46 84	1 36 90	6 11 51	29 1 61

City of La Quinta
Post 2020 General Plan Recommended Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #6 Washington St./Eisenhower Dr.

Cycle (sec): 115 Critical Vol./Cap. (X): 0.646
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 51.0
Optimal Cycle: 115 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Split Phase	Split Phase
Rights:	Include	Ovl	Include	Include
Min. Green:	10 25 25	10 25 25	25 25 25	25 25 25
Lanes:	1 0 3 1 0	1 0 3 0 1	2 0 1 1 0	0 0 1 1 0 0

Volume Module:

Base Vol:	22 1913	29	45 1971	389	401	3	14	26	3	38
Growth Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00	1.00 1.00	1.00	1.00
Initial Bse:	22 1913	29	45 1971	389	401	3	14	26	3	38
Added Vol:	0 0 0	0	0 0 0	0	0 0 0	0	0	0 0 0	0	0
PasserByVol:	0 0 0	0	0 0 0	0	0 0 0	0	0	0 0 0	0	0
Initial Fut:	22 1913	29	45 1971	389	401	3	14	26	3	38
User Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00	1.00 1.00	1.00	1.00
PHF Adj:	0.95 0.95	0.95	0.95 0.95	0.95	0.95 0.95	0.95	0.95	0.95 0.95	0.95	0.95
PHF Volume:	23 2014	31	47 2075	409	422	3	15	27	3	40
Reduct Vol:	0 0 0	0	0 0 0	0	0 0 0	0	0	0 0 0	0	0
Reduced Vol:	23 2014	31	47 2075	409	422	3	15	27	3	40
PCE Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00	1.00 1.00	1.00	1.00
MLF Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00	1.00 1.00	1.00	1.00
Final Vol:	23 2014	31	47 2075	409	422	3	15	27	3	40

Saturation Flow Module:

Sat/Lane:	1900 1900	1900	1900 1900	1900	1900 1900	1900	1900 1900	1900	1900 1900	1900
Adjustment:	0.95 0.91	0.91	0.95 0.91	0.85	0.92 0.95	0.81	0.81 0.81	0.81	0.95 0.95	0.85
Lanes:	1.00 3.94	0.06	1.00 3.00	1.00	2.00 1.00	1.00	0.39 0.04	0.57	1.00 2.00	1.00
Final Sat:	1805 6798	105	1805 5187	1615	3502 1805	1534	592 66	877	1805 5187	1615

Capacity Analysis Module:

Vol/Sat:	0.01 0.30	0.30	0.03 0.40	0.25	0.12 0.00	0.01	0.05 0.05	0.05
Crit Moves:	****		****		****		****	
Green/Cycle:	0.09 0.37	0.37	0.09 0.37	0.59	0.22 0.22	0.22	0.22 0.22	0.22
Volume/Cap:	0.15 0.79	0.79	0.30 1.07	0.43	0.55 0.01	0.04	0.21 0.21	0.21
Delay/Veh:	49.0 33.8	33.8	50.3 78.1	13.2	40.9 35.3	35.6	37.2 37.2	37.2
User DelAdj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
AdjDel/Veh:	49.0 33.8	33.8	50.3 78.1	13.2	40.9 35.3	35.6	37.2 37.2	37.2
DesignQueue:	1 87	1	3 92	11	22 0	1	1 0	2

City of La Quinta
Post 2020 General Plan Recommended Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #7 Washington St./Ave. 50

Cycle (sec): 99 Critical Vol./Cap. (X): 0.877
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 47.3
Optimal Cycle: 99 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Ovl	Include	Ovl
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 3 0 1	2 0 3 0 1	1 0 2 0 1	1 0 2 0 1

Volume Module:

Base Vol:	142 1029	194	289 1177	522	536 526	134	207 468	382
Growth Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
Initial Bse:	142 1029	194	289 1177	522	536 526	134	207 468	382
Added Vol:	0 0 0	0	0 0 0	0	0 0 0	0	0 0 0	0
PasserByVol:	0 0 0	0	0 0 0	0	0 0 0	0	0 0 0	0
Initial Fut:	142 1029	194	289 1177	522	536 526	134	207 468	382
User Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
PHF Adj:	0.95 0.95	0.95	0.95 0.95	0.95	0.95 0.95	0.95	0.95 0.95	0.95
PHF Volume:	149 1083	204	304 1239	549	564 554	141	218 493	402
Reduct Vol:	0 0 0	0	0 0 0	0	0 0 0	0	0 0 0	0
Reduced Vol:	149 1083	204	304 1239	549	564 554	141	218 493	402
PCE Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
MLF Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
Final Vol:	149 1083	204	304 1239	549	564 554	141	218 493	402

Saturation Flow Module:

Sat/Lane:	1900 1900	1900	1900 1900	1900	1900 1900	1900	1900 1900	1900
Adjustment:	0.95 0.91	0.85	0.92 0.91	0.85	0.95 0.95	0.85	0.95 0.95	0.85
Lanes:	1.00 3.00	1.00	2.00 3.00	1.00	1.00 2.00	1.00	1.00 2.00	1.00
Final Sat:	1805 5187	1615	3502 5187	1615	1805 3610	1615	1805 3610	1615

Capacity Analysis Module:

Vol/Sat:	0.08 0.21	0.13	0.09 0.24	0.34	0.31 0.15	0.09	0.12 0.14	0.25
Crit Moves:	****		****		****		****	
Green/Cycle:	0.10 0.25	0.25	0.10 0.25	0.53	0.27 0.25	0.25	0.27 0.25	0.35
Volume/Cap:	0.82 0.83	0.50	0.86 0.95	0.65	1.15 1.61	0.35	0.44 0.54	0.70
Delay/Veh:	57.8 39.4	32.6	62.4 50.3	18.7	123.2 33.9	30.8	30.4 32.7	31.5
User DelAdj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
AdjDel/Veh:	57.8 39.4	32.6	62.4 50.3	18.7	123.2 33.9	30.8	30.4 32.7	31.5
DesignQueue:	8 47	9	15 54	16	24 24	6	9 21	15

City of La Quinta
Post 2020 General Plan Recommended Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #8 Jefferson St./Country Club Dr.

Cycle (sec): 109 Critical Vol./Cap. (X): 0.888
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 45.7
Optimal Cycle: 109 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ignore			Include			Include		
Min. Green:	10	25	25	0	25	25	10	25	25	10	25	0
Lanes:	2	0	2	1	0	2	0	1	0	1	0	0

Volume Module:

Base Vol:	393	1172	154	0	891	858	824	255	363	134	296	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	393	1172	154	0	891	0	824	255	363	134	296	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	393	1172	154	0	891	0	824	255	363	134	296	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	414	1234	162	0	938	0	867	268	382	141	312	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	414	1234	162	0	938	0	867	268	382	141	312	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	414	1234	162	0	938	0	867	268	382	141	312	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.89	0.89	1.00	0.95	1.00	0.92	1.00	0.85	0.95	1.00	1.00
Lanes:	2.00	2.65	0.35	1.00	2.00	1.00	2.00	1.00	1.00	1.00	1.00	0.00
Final Sat:	1502	4507	592	1900	3610	1900	3502	1900	1615	1805	1900	0

Capacity Analysis Module:

Vol/Sat:	0.12	0.27	0.27	0.00	0.26	0.00	0.25	0.14	0.24	0.08	0.16	0.00
Crit Moves:	****			****			****			****		
Green/Cycle:	0.12	0.40	0.40	0.00	0.27	0.00	0.26	0.40	0.40	0.09	0.23	0.00
Volume/Cap:	2.95	0.69	0.69	0.00	0.95	0.00	0.95	0.35	0.59	0.85	0.72	0.00
Delay/Veh:	77.3	28.1	28.1	0.0	56.1	0.0	57.8	23.2	27.3	80.9	44.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	77.3	28.1	28.1	0.0	56.1	0.0	57.8	23.2	27.3	80.9	44.3	0.0
DesignQueue:	23	48	6	0	44	0	41	10	15	8	15	0

City of La Quinta
Post 2020 General Plan Recommended Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #9 Jefferson St./Ave. 44

Cycle (sec): 99 Critical Vol./Cap. (X): 0.877
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 49.5
Optimal Cycle: 99 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	2	1	0	2	1	0	2	1	0	2

Volume Module:

Base Vol:	69	1488	38	1	1194	241	226	747	183	91	1122	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	69	1488	38	1	1194	241	226	747	183	91	1122	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	69	1488	38	1	1194	241	226	747	183	91	1122	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	73	1566	40	1	1257	254	238	786	193	96	1181	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	73	1566	40	1	1257	254	238	786	193	96	1181	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	73	1566	40	1	1257	254	238	786	193	96	1181	1

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.89	0.89	0.95	0.95	0.85	0.95	0.95	0.85
Lanes:	1.00	2.93	0.07	1.00	2.50	0.50	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat:	1805	5038	129	1805	4207	850	1805	3610	1615	1805	3610	1615

Capacity Analysis Module:

Vol/Sat:	0.04	0.31	0.31	0.00	0.30	0.30	0.13	0.22	0.12	0.05	0.33	0.00
Crit Moves:	****			****			****			****		
Green/Cycle:	0.10	0.31	0.31	0.10	0.31	0.31	0.13	0.33	0.33	0.13	0.33	0.33
Volume/Cap:	0.40	0.99	0.99	0.01	0.95	0.95	0.99	0.66	0.36	0.40	0.99	0.00
Delay/Veh:	43.1	53.7	53.7	40.0	46.1	46.1	97.9	29.7	25.6	40.5	56.5	22.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.1	53.7	53.7	40.0	46.1	46.1	97.9	29.7	25.6	40.5	56.5	22.2
DesignQueue:	4	64	2	0	51	10	12	31	7	5	47	0

Default Scenario	Tue Aug 29, 2000 17:05:38										Page 11-1	
City of La Quinta												
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1997 HCM Operations Method (Future Volume Alternative)												
.....												
Intersection #10 Jefferson St./Miles Ave.												
Cycle (sec):	102			Critical Vol./Cap. (X):						0.880		
Loss Time (sec):	12 (Y+R = 4 sec)			Average Delay (sec/veh):						43.7		
Optimal Cycle:	102			Level Of Service:						D		

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ignore		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	2	1	0	2	1	0	1	0	1	0

Volume Module:												
Base Vol:	278	1188	23	143	1239	87	262	473	82	80	341	144
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Initial Bse:	278	1188	23	143	1239	87	262	473	82	80	341	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	278	1188	23	143	1239	87	262	473	82	80	341	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	293	1251	24	151	1304	92	276	498	86	84	359	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	293	1251	24	151	1304	92	276	498	86	84	359	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol:	293	1251	24	151	1304	92	276	498	86	84	359	0

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.90	0.90	0.95	1.00	0.85	0.95	1.00	1.00
Lanes:	1.00	2.94	0.06	1.00	2.80	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat:	1805	5074	97	1805	4797	338	1805	1900	1615	1805	1900	1900

Capacity Analysis Module:												
Vol/Sat:	0.16	0.25	0.25	0.08	0.27	0.27	0.15	0.26	0.05	0.05	0.19	0.00
Crit Moves:	****			****			****			****		
Green/Cycle:	0.18	0.37	0.37	0.10	0.30	0.30	0.17	0.31	0.31	0.10	0.25	0.00
Volume/Cap:	1.92	0.66	0.66	0.85	0.92	0.92	0.92	0.84	0.17	0.47	0.77	0.00
Delay/Veh:	72.2	27.5	27.5	76.1	44.4	44.4	74.1	42.7	25.6	45.5	43.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	72.2	27.5	27.5	76.1	44.4	44.4	74.1	42.7	25.6	45.5	43.6	0.0
DesignQueue:	14	47	1	8	56	4	14	21	3	4	16	0

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1997 HCM Operations Method (Future Volume Alternative)															
Intersection #11 Jefferson St./Hwy. 111															
Cycle (sec):	82	Critical Vol./Cap. (X):							0.714						
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):							36.2						
Optimal Cycle:	82	Level Of Service:							D						
Approach: North Bound South Bound East Bound West Bound															
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R				
Control:	Protected			Protected			Protected			Protected					
Rights:	Include			Include			Include			Include					
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25			
Lanes:	2	0	3	0	1	2	0	3	0	1	2	0	3	0	1
Volume Module:															
Base Vol:	78	1042	288	136	1054	122	170	1412	208	320	1508	181			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	78	1042	288	136	1054	122	170	1412	208	320	1508	181			
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0			
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0			
Initial Fut:	78	1042	288	136	1054	122	170	1412	208	320	1508	181			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
PHF Volume:	82	1097	303	143	1109	128	179	1486	219	337	1587	191			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0			
Reduced Vol:	82	1097	303	143	1109	128	179	1486	219	337	1587	191			
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Final Vol:	82	1097	303	143	1109	128	179	1486	219	337	1587	191			
Saturation Flow Module:															
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900			
Adjustment:	0.92	0.91	0.85	0.92	0.91	0.85	0.92	0.91	0.85	0.92	0.91	0.85			
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00			
Final Sat:	3502	5187	1615	3502	5187	1615	3502	5187	1615	3502	5187	1615			
Capacity Analysis Module:															
Vol/Sat:	0.02	0.21	0.19	0.04	0.21	0.08	0.05	0.29	0.14	0.10	0.31	0.12			
Crit Moves:	***			***			***			***					
Green/Cycle:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30			
Volume/Cap:	1.19	0.69	0.62	0.33	0.70	0.26	0.42	0.94	0.44	0.79	1.00	0.39			
Delay/Veh:	32.6	26.5	26.7	33.4	26.6	21.8	34.0	39.1	23.6	44.5	52.0	23.0			
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
AdjDel/Veh:	32.6	26.5	26.7	33.4	26.6	21.8	34.0	39.1	23.6	44.5	52.0	23.0			
DesignQueue:	3	37	10	6	37	4	7	51	7	14	54	6			

City of La Quinta
Post 2020 General Plan Recommended Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #12 Jefferson St./Ave. 48

Cycle (sec): 120 Critical Vol./Cap. (X): 0.911
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 44.1
Optimal Cycle: 120 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Ovl	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 2 1 0	1 0 2 1 0	1 0 2 0 1	2 0 1 1 0

Volume Module:

Base Vol:	855 1077	105	72 1403	177	117 622	556	45 463	278
Growth Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
Initial Bse:	855 1077	105	72 1403	177	117 622	556	45 463	278
User Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
PHF Adj:	0.95 0.95	0.95	0.95 0.95	0.95	0.95 0.95	0.95	0.95 0.95	0.95
PHF Volume:	809 1134	111	76 1477	186	123 655	585	47 487	293
Reduced Vol:	0 0	0	0 0	0	0 0	0	0 0	0
Reduced Vol:	809 1134	111	76 1477	186	123 655	585	47 487	293
PCE Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
MLF Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
Final Vol:	809 1134	111	76 1477	186	123 655	585	47 487	293

Saturation Flow Module:

Sat/Lane:	1900 1900	1900	1900 1900	1900	1900 1900	1900	1900 1900	1900
Adjustment:	0.92 0.90	0.90	0.95 0.89	0.89	0.95 0.95	0.85	0.92 0.90	0.90
Lanes:	2.00 2.73	0.27	1.00 2.66	0.34	1.00 2.00	1.00	2.00 1.25	0.75
Final Sat:	1802 4663	456	1805 4529	570	1805 3610	1615	3502 2128	1280

Capacity Analysis Module:

Vol/Sat:	0.20 0.24	0.24	0.04 0.33	0.33	0.07 0.18	0.36	0.01 0.23	0.23
Crit Moves:	****		****		****		****	
Green/Cycle:	0.21 0.48	0.48	0.08 0.35	0.35	0.08 0.24	0.45	0.09 0.25	0.25
Volume/Cap:	0.92 0.50	0.50	0.51 0.92	0.92	0.82 0.77	0.80	0.14 0.92	0.92
Delay/Veh:	52.8 21.2	21.2	55.4 45.3	45.3	82.4 46.8	34.8	50.0 59.0	59.0
User DelAdj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
AdjDel/Veh:	51.8 21.2	21.2	55.4 45.3	45.3	82.4 46.8	34.8	50.0 59.0	59.0
DesignQueue:	38 41	4	5 69	9	8 35	23	3 26	16

City of La Quinta
Post 2020 General Plan Recommended Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #13 Jefferson St./Ave. 50

Cycle (sec): 97 Critical Vol./Cap. (X): 0.824
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 42.7
Optimal Cycle: 97 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Split Phase	Split Phase
Rights:	Include	Ovl	Include	Include
Min. Green:	10 25 25	10 25 25	25 25 25	25 25 25
Lanes:	2 0 3 0 1	2 0 3 0 1	1 1 1 0 1	1 1 1 0 1

Volume Module:

Base Vol:	89 1033	88	396 970	426	476 580	103	76 629	147
Growth Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
Initial Bse:	89 1033	88	396 970	426	476 580	103	76 629	147
Added Vol:	0 0	0	0 0	0	0 0	0	0 0	0
PasserByVol:	0 0	0	0 0	0	0 0	0	0 0	0
Initial Fut:	89 1033	88	396 970	426	476 580	103	76 629	147
User Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
PHF Adj:	0.95 0.95	0.95	0.95 0.95	0.95	0.95 0.95	0.95	0.95 0.95	0.95
PHF Volume:	94 1087	93	417 1021	448	501 611	108	80 662	155
Reduced Vol:	0 0	0	0 0	0	0 0	0	0 0	0
Reduced Vol:	94 1087	93	417 1021	448	501 611	108	80 662	155
PCE Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
MLF Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
Final Vol:	94 1087	93	417 1021	448	501 611	108	80 662	155

Saturation Flow Module:

Sat/Lane:	1900 1900	1900	1900 1900	1900	1900 1900	1900	1900 1900	1900
Adjustment:	0.92 0.91	0.85	0.92 0.91	0.85	0.90 0.95	0.85	0.90 0.95	0.85
Lanes:	2.00 3.00	1.00	2.00 3.00	1.00	1.39 1.61	1.00	1.00 2.00	1.00
Final Sat:	1802 5187	1615	1802 5187	1615	2383 2906	1615	1715 3610	1615

Capacity Analysis Module:

Vol/Sat:	0.23 0.21	0.06	0.12 0.20	0.28	0.21 0.21	0.07	0.05 0.18	0.10
Crit Moves:	****		****		****		****	
Green/Cycle:	0.10 0.26	0.26	0.10 0.26	0.52	0.26 0.26	0.26	0.26 0.26	0.26
Volume/Cap:	0.26 0.81	0.22	1.16 0.76	0.54	0.82 0.82	0.26	0.18 0.71	0.37
Delay/Veh:	40.5 37.7	28.6	140.1 35.9	16.5	37.8 37.8	29.0	28.1 35.0	30.1
User DelAdj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
AdjDel/Veh:	40.5 37.7	28.6	140.1 35.9	16.5	37.8 37.8	29.0	28.1 35.0	30.1
DesignQueue:	5 46	4	21 43	12	21 26	4	3 28	6

City of La Quinta
Post 2020 General Plan Recommended Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #15 Madison St. Ave. 50

Cycle (sec): 120 Critical Vol./Cap. (X): 0.918
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 49.8
Optimal Cycle: 120 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	1	1	0	1	1	0	1	0	1	1

Volume Module:

Base Vol:	37	660	80	388	680	124	173	559	230	100	617	296
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	37	660	80	388	680	124	173	559	230	100	617	296
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	37	660	80	388	680	124	173	559	230	100	617	296
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	39	695	84	408	716	131	182	588	242	105	649	312
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	39	695	84	408	716	131	182	588	242	105	649	312
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	39	695	84	408	716	131	182	588	242	105	649	312

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.93	0.93	0.95	0.91	0.91	0.95	0.90	0.90
Lanes:	1.00	1.78	0.22	1.00	1.69	0.31	1.00	1.42	0.58	1.00	1.35	0.65
Final Sat:	1805	3169	383	1805	2981	545	1805	2445	1006	1805	2319	1115

Capacity Analysis Module:

Vol/Sat:	0.02	0.22	0.22	0.23	0.24	0.24	0.10	0.24	0.24	0.06	0.28	0.28
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.08	0.24	0.24	0.25	0.40	0.40	0.11	0.33	0.33	0.08	0.30	0.30
Volume/Cap:	0.26	0.92	0.92	0.92	0.60	0.60	0.92	0.73	0.73	0.70	0.92	0.92
Delay/Veh:	52.4	59.2	59.2	67.9	29.0	29.0	94.4	37.7	37.7	67.0	52.7	52.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	52.4	59.2	59.2	67.9	29.0	29.0	94.4	37.7	37.7	67.0	52.7	52.7
DesignQueue:	2	37	5	22	30	6	11	28	11	7	32	15

City of La Quinta
Post 2020 General Plan Recommended Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #16 Madison St./Ave. 52

Cycle (sec): 82 Critical Vol./Cap. (X): 0.824
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 45.2
Optimal Cycle: 82 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	1	1	0	1	1	0	1	0	1	1

Volume Module:

Base Vol:	208	559	51	127	708	119	76	885	187	25	705	102
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	208	559	51	127	708	119	76	885	187	25	705	102
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	208	559	51	127	708	119	76	885	187	25	705	102
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	219	588	54	134	745	125	80	932	197	26	742	107
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	219	588	54	134	745	125	80	932	197	26	742	107
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	219	588	54	134	745	125	80	932	197	26	742	107

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.93	0.93	0.95	0.93	0.93	0.95	0.93	0.93
Lanes:	1.00	1.83	0.17	1.00	1.71	0.29	1.00	1.65	0.35	1.00	1.75	0.25
Final Sat:	1805	3263	300	1805	3023	507	1805	2903	614	1805	3095	446

Capacity Analysis Module:

Vol/Sat:	0.12	0.18	0.18	0.07	0.25	0.25	0.04	0.32	0.32	0.01	0.24	0.24
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30
Volume/Cap:	0.99	0.59	0.59	0.61	0.81	0.81	0.36	1.05	1.05	0.12	0.79	0.79
Delay/Veh:	95.1	25.0	25.0	39.0	30.9	30.9	34.1	71.1	71.1	32.3	30.0	30.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	95.1	25.0	25.0	39.0	30.9	30.9	34.1	71.1	71.1	32.3	30.0	30.0
DesignQueue:	9	19	2	5	25	4	3	32	7	1	25	4

City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #17 Jackson St./Airport Blvd.

Cycle (sec): 90 Critical Vol./Cap. (X): 0.830
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 50.9
Optimal Cycle: 90 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 10 25 25 10 25 25 10 25 25 10 25 25
Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1 1 0

Volume Module:

Base Vol: 286 437 133 360 790 161 64 479 237 201 592 215
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 286 437 133 360 790 161 64 479 237 201 592 215
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 286 437 133 360 790 161 64 479 237 201 592 215
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 301 460 140 379 832 169 67 504 249 212 623 226
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 301 460 140 379 832 169 67 504 249 212 623 226
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol: 301 460 140 379 832 169 67 504 249 212 623 226

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.92 0.92 0.95 0.93 0.93 0.95 0.90 0.90 0.95 0.91 0.91
Lanes: 1.00 1.53 0.47 1.00 1.66 0.34 1.00 1.34 0.66 1.00 1.47 0.53
Final Sat: 1805 2671 813 1805 2926 594 1805 2295 1134 1805 2543 923

Capacity Analysis Module:

Vol/Sat: 0.17 0.17 0.17 0.21 0.28 0.28 0.04 0.22 0.22 0.12 0.24 0.24
Crit Moves: ****
Green/Cycle: 0.16 0.28 0.28 0.20 0.30 0.30 0.11 0.28 0.28 0.11 0.28 0.28
Volume/Cap: 0.95 0.62 0.62 1.05 0.95 0.95 0.33 0.79 0.79 1.05 0.88 0.88
Delay/Veh: 72.7 29.6 29.6 97.9 46.9 46.9 37.9 34.6 34.6 117.9 40.5 40.5
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 72.7 29.6 29.6 97.9 46.9 46.9 37.9 34.6 34.6 117.9 40.5 40.5
DesignQueue: 13 17 5 16 31 6 3 19 9 10 24 9

City of La Quinta
Post 2020 General Plan Recommended Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #18 Harrison St./Airport Blvd.

Cycle (sec): 82 Critical Vol./Cap. (X): 0.803
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 38.6
Optimal Cycle: 82 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 10 25 25 10 25 25 10 25 25 10 25 25
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 1 0

Volume Module:

Base Vol: 67 1093 118 3 1180 232 197 498 52 207 796 16
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 67 1093 118 3 1180 232 197 498 52 207 796 16
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 67 1093 118 3 1180 232 197 498 52 207 796 16
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 71 1151 124 3 1242 244 207 524 55 218 838 17
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 71 1151 124 3 1242 244 207 524 55 218 838 17
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol: 71 1151 124 3 1242 244 207 524 55 218 838 17

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.90 0.90 0.95 0.89 0.89 0.95 0.94 0.94 0.95 0.95 0.95
Lanes: 1.00 2.71 0.29 1.00 2.51 0.49 1.00 1.81 0.19 1.00 1.96 0.04
Final Sat: 1805 4612 497 1805 4227 830 1805 3221 338 1805 3528 72

Capacity Analysis Module:

Vol/Sat: 0.14 0.25 0.25 0.00 0.29 0.29 0.11 0.16 0.16 0.12 0.24 0.24
Crit Moves: ****
Green/Cycle: 0.12 0.30 0.30 0.12 0.30 0.30 0.12 0.30 0.30 0.12 0.30 0.30
Volume/Cap: 0.32 0.82 0.82 0.01 0.96 0.96 0.94 0.53 0.53 0.99 0.78 0.78
Delay/Veh: 33.8 29.9 29.9 31.7 43.2 43.2 79.8 24.2 24.2 93.7 29.6 29.6
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 33.8 29.9 29.9 31.7 43.2 43.2 79.8 24.2 24.2 93.7 29.6 29.6
DesignQueue: 3 39 4 0 42 8 9 17 2 9 28 1

Default Scenario	Tue Aug 29, 2000 17:05:38										Page 20-1				
City of La Quinta															
Post 2020 General Plan Recommended Alternative															
PM Peak Hour Conditions															
Level Of Service Computation Report															
1997 HCM Operations Method (Future Volume Alternative)															
Intersection #19 Grapefruit Blvd./Airport Blvd.															
Cycle (sec):	111	Critical Vol./Cap. (X):								0.891					
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):								49.0					
Optimal Cycle:	111	Level Of Service:								D					
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Protected			Protected			Protected			Protected					
Rights:	Include			Include			Include			Include					
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25			
Lanes:	2	0	1	1	0	1	0	3	0	1	2	0	2	1	0
Volume Module:															
Base Vol:	325	694	562	79	644	277	257	1007	261	460	945	59			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	325	694	562	79	644	277	257	1007	261	460	945	59			
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0			
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0			
Initial Fut:	325	694	562	79	644	277	257	1007	261	460	945	59			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
PHF Volume:	342	731	592	83	678	292	271	1060	275	484	995	62			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0			
Reduced Vol:	342	731	592	83	678	292	271	1060	275	484	995	62			
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Final Vol.:	342	731	592	83	678	292	271	1060	275	484	995	62			
Saturation Flow Module:															
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900			
Adjustment:	0.92	0.89	0.89	0.95	0.91	0.91	0.95	0.91	0.85	0.92	0.90	0.90			
Lanes:	2.00	1.11	0.89	1.00	1.40	0.60	1.00	3.00	1.00	2.00	2.82	0.18			
Final Sat.:	3502	1861	1507	1805	2410	1038	1805	5187	1615	3502	4839	302			
Capacity Analysis Module:															
Vol/Sat:	0.10	0.39	0.39	0.05	0.28	0.28	0.15	0.20	0.17	0.14	0.21	0.21			
Crit Moves:	****			****			****			****					
Green/Cycle:	0.13	0.42	0.42	0.09	0.38	0.38	0.16	0.23	0.23	0.16	0.23	0.23			
Volume/Cap:	1.75	0.94	0.94	0.51	0.75	0.75	0.94	0.91	0.76	0.87	0.91	0.91			
Delay/Veh:	53.1	43.7	43.7	50.9	32.5	32.5	83.8	52.2	48.9	59.0	52.9	52.9			
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
AdjDel/Veh:	53.1	43.7	43.7	50.9	32.5	32.5	83.8	52.2	48.9	59.0	52.9	52.9			
DesignQueue:	19	29	23	5	28	12	15	53	14	26	50	3			

Default Scenario	Tue Aug 29, 2000 17:05:38										Page 21-1		
City of La Quinta													
Post 2020 General Plan Recommended Alternative													
PM Peak Hour Conditions													
Level Of Service Computation Report													
1997 HCM Operations Method (Future Volume Alternative)													
Intersection #20 Grapefruit Blvd./Ave. 62													
Cycle (sec):	90			Critical Vol./Cap. (X):								0.654	
Loss Time (sec):	12 (Y+R = 4 sec)			Average Delay (sec/veh):								46.4	
Optimal Cycle:	90			Level Of Service:								D	

Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	

Control:	Protected			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25	
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	

Volume Module:													
Base Vol:	143	300	87	150	445	68	49	83	160	379	134	116	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	143	300	87	150	445	68	49	83	160	379	134	116	
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0	
Initial Fut:	143	300	87	150	445	68	49	83	160	379	134	116	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
PHF Volume:	151	316	92	158	468	72	52	87	168	399	141	122	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	151	316	92	158	468	72	52	87	168	399	141	122	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Final Vol.:	151	316	92	158	468	72	52	87	168	399	141	122	

Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.92	0.92	0.95	0.93	0.93	0.95	0.95	0.81	0.95	0.88	0.88	
Lanes:	1.00	1.55	0.45	1.00	1.73	0.27	1.00	1.00	1.00	1.00	1.07	0.93	
Final Sat.:	1805	2701	786	1805	3066	472	1805	1805	1534	1805	1800	1557	

Capacity Analysis Module:													
Vol/Sat:	0.08	0.12	0.12	0.09	0.15	0.15	0.03	0.05	0.11	0.22	0.08	0.08	
Crit Moves:	****			****			****			****			
Green/Cycle:	0.11	0.28	0.28	0.11	0.28	0.28	0.14	0.28	0.28	0.20	0.34	0.34	
Volume/Cap:	0.75	0.42	0.42	0.79	0.55	0.55	0.21	0.17	0.39	1.11	0.23	0.23	
Delay/Veh:	53.6	26.9	26.9	57.5	28.4	28.4	35.0	24.7	26.8	114.8	21.3	21.3	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	53.6	26.9	26.9	57.5	28.4	28.4	35.0	24.7	26.8	114.8	21.3	21.3	
DesignQueue:	7	12	3	7	18	3	2	3	6	17	5	4	

LQTM POST 2020 GENERAL PLAN PREFERRED LAND USE BY CVATS CATAGORIES

LA QUINTA TAZ	Very Low Density (0-2 du/ac)	Low Density (3-6 du/ac)	Med. (7- 15 du/ac)	High (16-21 du/ac)	Very High (22+ du/ac)	Tourist, Resort/ Hotel	Park, Golf Cse., etc.	Gen. & Neigh. Comm., CBD, etc.	Public Facility	Gov. Bldgs. Health Care, etc.	Open Space, Agr., Water Courses	Light Ind	Heavy Ind.	Tranportation/ Utility	Schools (All levels)	TOTAL ACRES
632	58.91	1.28855	0	0	0	0	0	0.32	0	0	0	7.16	7.16	0	0	74.8385
635	28.66	30.06	0	0	0	0	0	12.5369	0	0	0	0	0	0	0	71.2569
648	70.75	0	0	0	0	0	0	0	0	0	0	15.47	15.47	0	0	101.69
651	0	38.34	0	0	0	0	0	0	34.295	0	0	23.5348	23.5348	34.29521786	0	154
655	0.03	180.62	0	0	0	0	0	0	0	0	0	1.37	1.37	0	0	183.39
656	49.1	118.27	0	0	0	0	0	0	0	0	0	0.01	0.01	0	0	167.39
659	51.19	19.8128	0	0	0	0	0	11.45	0	0	0	0	0	0	0	82.4528
660	55.62	23.05	0	0	0	0	0	0	0.4506	0	0	0	0	0	0	79.1206
685	0	126.52	1.97	0	0	0	18.64	0	0	0	0	0	0	0	0	147.13
686	0	219.23	0.38	0	0	0	61.9	0	0	0	0	0	0	0	0	281.51
687	0	124.85	0.59	0	0	0	0	16.79	0	0	0	0	0	0	9.23116	151.461
700	0	135.68	0	0	0	0	115.84	0	0	0	0	0	0	0	0	251.52
713	0	86.66	22.03	0	0	0	0	0	0	4.12	0	0	0	0	0	112.81
721	0	130.101	0	0	0	0	0	0	0	0	0	0	0	0	0	130.101
725	0	242.841	0	0	0	0	29.2348	6.57653	0	0	0	0	0	0	0	278.653
728	0	132.425	12.07	0	0	0	0.07	32.8299	0	22.7192	0	0	0	0	0	200.115
734	0	52.93	0	0	0	0	0	0	0	0	0	0	0	0	0	52.93
741	0	157.831	0	0	0	0	0	0.63117	0	0	0	0	0	0	0	158.462
775	0	92.2446	0	0	0	0.7763	0.57	1.60404	0	0.52199	0	0	0	22.47639578	51.16	169.353
803	0	0	0	0	0	0	0	38.37	0	0	0	31.76	0	0	0	70.13
810	0	72.78	0	0	0	0	13.22	0	0	0	0	0	0	28.36	0	114.36
818	0	0	0	0	0	0	0	41.6	0	0	0	0	0	0	0	41.6
881	0	0	0	0	0	0	0	27.41	0	0	2.54	0	0	0.33	0	30.28
885	0	1.33	0	0	0	0	0	94.58	0	0	0	0	0	0	0	95.91
889	0	20.2682	0	0	0	0	15.531	0.89464	0	0	0	0	0	10.84	0	47.5338
891	0	8.62	0	0	0	0	0	5.51	0	0	3.15	0	0	0	0	17.28
893	0	275.4	0	0	0	0	0.32	0.43346	0	0	106.79	0	0	0.058799656	0	383.002
896	0	0	0	0	0	0	0	122.54	0	0	0	0	0	0	0	122.54
899	0	125.94	0	0	0	0	0	34.28	0	0	0	0	0	0	0	160.22
904	0	0	0	0	0	27.52	0	27.55	0	0	0	31.88	0	0.45	0	87.4
912	0	34.58	0	0	0	0	0	0	0	0	0	0	0	8.66	0	43.24
913	0	0	46.79	0	0	0	0	0	0	0	0	0	0	0	0	46.79

APPENDIX B

POST 2020 GENERAL PLAN LAND USE ALTERNATIVES

APPENDIX B-1

LQTM POST 2020 GENERAL PLAN PREFERRED LAND USE BY CVATS CATAGORIES

LA QUINTA TAZ	Very Low Density (0-2 du/ac)	Low Density (3-6 du/ac)	Med. (7- 15 du/ac)	High (16-21 du/ac)	Very High (22+ du/ac)	Tourist, Resort/ Hotel	Park, Golf Cse., etc.	Gen. & Neigh. Comm., CBD, etc.	Public Facility	Gov. Bldgs. Health Care, etc.	Open Space, Agr., Water Courses	Light Ind	Heavy Ind.	Tranportation/ Utility	Schools (All levels)	TOTAL ACRES
968	0	97.5	0	0	0	0	0.83	0	0	0	0	0	0	0	0	98.33
975	0	558.61	0	0	0	0	0	0	0	0	0	0	0	0	0	558.61
976	0	631.53	0	0	0	0	0	0	0	0	0	0	0	0	0	631.53
977	25.45	82.162	0	0	0	0	211.74	0	0	0	0	0	0	0	0	319.352
978	0	21.78	0	0	0	0	58.09	0	0	0	1027.52	0	0	61.61	0	1169
979	0.11	420.39	0	0	0	21.147	444.33	27.74	2.3497	0	0	0	0	0.98	0	917.047
982	0	0	0	0	0	0	0	0	0	0	0	126.418	126.418	0	18.63	271.466
983	0	603.52	0	0	0	0	0	19.35	0	0	0	0	0	0	9.04999	631.92
984	0	486.04	0	0	0	25.79	262.17	0	0	0	0	0	0	112.46	0	886.46
985	0	167.45	0	0	0	0.61	156.65	0	0	0	0	0	0	0	0	324.71
986	0	111.52	0	0	0	0	160.59	19.02	0	0	0	0	0	0	39.5864	330.716
989	0	19.57	0	0	0	0	0	31.42	0	0	0	185.66	185.66	0	18.6263	440.936
990	0.97	0.68	0.05	0	0	0	0	12.34	1057.1	0	9.24	227.04	227.04	1057.12	0	2591.6
991	0	494.06	0	0	0	0	0	84.53	0	0	0	32.31	32.31	0	0	643.21
992	0	653.5	0	0	0	0	0	0	0	0	0	0	0	0	0	653.5
993	0	268.79	0	0	0	0	205.79	0	0	0	1424.11	0	0	0	0	1898.69
994	0	1.73	0	0	0	0	552.93	0	0	0	2.05	0	0	52.75	0	609.46
995	0	0	0	0	0	0	0	0	0	0	1344.89	0	0	30.93	0	1375.82
996	0	82.42	0	0	0	19.74	0.09	0	0	0	0	0	0	0	0	102.25
997	0	0	0	0	0	0	0	0	0	0	0	56.35	56.35	0	0	112.7
998	703.07	0	0	0	0	0	0	0	0.92	0	0	0.01	0.01	0.92	0	704.93
999	49.29	0	0	0	0	0	0	0	0	0	0	81.47	81.47	0	0	212.23
1000	0	406.22	0	0	0	0	0	10.51	0	0	0	0	0	0	0.95055	417.681
1001	0	556.03	0	0	0	0	0	91.07	0	0	0	0	0	0	0	647.1
1002	0	520.94	89.75	0	0	0	9.99	10.21	0	0	0	0	0	0	10.7142	641.604
1003	0	656.9	0	0	0	0	0	0	0	0	0	0	0	0	0	656.9
1004	0	203.25	0	0	0	0	128.52	0	0	0	0	0	0	0	0	331.77
1005	0	139.52	1.23	0	0	0	52.385	39.99	0	0	0	0	0	0	0	233.125
1006	0	8.71	0	0	0	0	16.13	0	0	0	0	0	0	0	0	24.84
1007	0	51.31	0	0	0	0	0.2	0	0	0	1.2	0	0	0	0	52.71
1008	405.47	0	0	0	0	0	0	0.05	0	0	0	0.5	0.5	0	0	406.52
1009	0	0	0	0	0	0	0	0	0	0	0	35.24	35.24	0	0	70.48

APPENDIX B-1

LQTM POST 2020 GENERAL PLAN PREFERRED LAND USE BY CVATS CATAGORIES

LA QUINTA TAZ	Very Low Density (0-2 du/ac)	Low Density (3-6 du/ac)	Med. (7- 15 du/ac)	High (16-21 du/ac)	Very High (22+ du/ac)	Tourist, Resort/ Hotel	Park, Golf Cse., etc.	Gen. & Neigh. Comm., CBD, etc.	Public Facility	Gov. Bldgs. Health Care, etc.	Open Space, Agr., Water Courses	Light Ind	Heavy Ind.	Tranportation/ Utility	Schools (All levels)	TOTAL ACRES
914	0	78.29	0	0	0	59.67	162.79	0	0	0	253.28	0	0	0.37	0	554.4
923	0	249.435	0	0	0	0	206.354	15.84	0	0	0	0	0	25.52646637	0	497.155
924	0	258.67	0.39	0	0	0	143.23	0.34	19.05	0	0	0	0	5.49	15	442.17
925	0	182.99	0	0	0	0	128.67	0	0	0	0	0	0	0	0	311.66
927	0	65.09	0.21	0	0	62.62	58.35	0.43	0	0	0	0	0	24.79	0	211.49
932	0	318.03	0	0	0	0	0	0	0	0	0	0	0	0	0	318.03
933	0	92.55	14.4	0	0	7.36	29.57	58.03	0	12.45	0	0	0	28.42	0	242.78
934	0	0	0	0	0	0	0.08	0	0	12.11	0	0	0	0.76	0	12.95
935	0	159.91	0	0	0	0.19	37.69	0.22	0	0.78	0	0	0	7.9	0	206.69
936	0	322.53	0	0	0	0	0	0	0	0	0	0	0	0	0	322.53
937	0	103.76	0	0	0	80.69	2.44	0.42	0	0	0	0	0	0	0	187.31
938	0	387.54	0.37	0	0	0	0	30.24	0	0	0	0	0	0	0	418.15
940	46.59	0.21	0	0	0	0	0	0	0	0	0	0	0	3.78	0	50.58
942	145.392	1.44178	0	0	0	0	0.13	0	0	0	0	0	0	20.94	0	167.903
943	0	239.42	0	0	0	0	271.83	15.28	0	0	0.47	0	0	0	0	527
945	0	61.94	0	0	0	0	24.04	34.25	22.066	0	0	0	0	0	0	142.296
946	0	170.36	0	0	0	0	0.12	0.68	0	0	4.09	0	0	3.67	0	178.92
947	0	5.19	0	0	0	0	29.07	0	0	0	322.6	0	0	65.93	0	422.79
948	0	46.33	0	0	0	0	6.69	20.74	0	0.59808	0	0	0	0	0	74.3581
950	0	160.18	0	0	0	0	224.38	0	0	0	315.65	0	0	0	0	700.21
954	0.64	124.21	0	0	0	0	255.8	0	0	0	0	0	0	0	19.5505	400.2
955	0	237.02	0	0	0	0	0.3	0	0	0	0	0	0	0	0	237.32
956	0	615.11	0	0	0	0	0	0	0	0	0	0	0	0	19.64	634.75
957	0.01	197.38	0.18	0	0	0.31	383.49	10.28	0	0	0	0	0	8.45	0	600.1
959	0	302.07	0	0	0	0	0	9.82	0	0	0	0	0	0	0	311.89
960	0	321.71	0	0	0	0	0	0	0	0	0	0	0	0	0	321.71
961	0	0	0	0	0	101.61	135.81	0.28	0	0	159.9	0	0	18.99	0	416.59
962	0	0	11.52	0	0	0	0	16.37	0	0	0	0	0	0.33	0	28.22
963	0	191.07	0	0	0	0	9.33	0	0	0	3.61	0	0	2.88	0	206.89
964	0	75.2	0	0	0	0	0	0	0	0	0	0	0	0	0	75.2
965	0	0	0	0	0	49.5	170.49	0	0	0	0	0	0	2.97	0	222.96
967	0	384.33	0	0	0	0	7.83	0	0	0	0	0	0	0.07	0	392.23

LQTM POST 2020 GENERAL PLAN PREFERRED LAND USE BY CVATS CATAGORIES

APPENDIX B-2

LQTM POST 2020 EXISTING GENERAL PLAN LAND USE BY CVATS CATAGORIES

LA QUINTA TAZ	Very Low Density (0-2 du/ac)	Low Density (3-6 du/ac)	Med. (7 15 du/ac)	High (16-21 du/ac)	Very High (22+ du/ac)	Tourist, Resort/ Hotel	Park, Golf Cse., etc.	Gen. & Neigh. Comm., CBD, etc.	Public Facility	Gov. Bldgs. Health Care, etc.	Open Space, Agr., Water Courses	Light Ind	Heavy Ind.	Tranportation/ Utility	Schools (All levels)	TOTAL ACRES
913	0	0	0	0	0	0	0	46.79	0	0	0	0	0	0	0	46.79
914	0	136.47	0	0	0	1.5	162.79	0	0	0	253.28	0	0	0.37	0	554.41
923	0	246.654	0	0	0	0	206.354	18.53	0	0	0	0	0	25.52646637	0	497.065
924	0	280.95	0	0	0	0	120.96	0.92	0	0	0	0	0	5.49	15	423.32
925	0	182.99	0	0	0	0	128.65	0	0	0	0	0	0	0	0	311.64
927	0	65.06	0.19	0	0	62.65	58.28	0.42	0	0	0	0	0	24.8	0	211.4
932	299.65	18.38	0	0	0	0	0	0	0	0	0	0	0	0	0	318.03
933	0	108.59	14.42	0	0	3.3239	23.95	58.78	0	4.98583	0	0	0	28.43	0	242.48
934	0	0	0	0	0	0	0.08	0	0	12.11	0	0	0	0.76	0	12.95
935	0	159.91	0	0	0	0.19	37.69	0.22	0	0.78	0	0	0	7.9	0	206.69
936	253.94	68.59	0	0	0	0	0	0	0	0	0	0	0	0	0	322.53
937	0	103.76	0	0	0	80.69	2.44	0.42	0	0	0	0	0	0	0	187.31
938	0	407.8	0	0	0	0	0	10.28	0	0	0	0	0	0	0	418.08
940	46.59	0.21	0	0	0	0	0	0	0	0	0	0	0	3.78	0	50.58
942	146.611	0.84604	0	0	0	0	0	0	0	0	0	0	0	20.94	0	168.397
943	0	342.38	0	0	0	0	169.14	15.1	0	0	0.47	0	0	0	0	527.09
945	0	39.95	0	0	0	0	24.04	56.25	22.062	0	0	0	0	0	0	142.302
946	0	170.14	0	0	0	0	0.34	0.68	0	0	4.09	0	0	3.67	0	178.92
947	0	3.4	0	0	0	0	28.37	0	0	0	325.08	0	0	65.94	0	422.79
948	0	46.68	0	0	0	0	6.69	20.74	0	0.24594	0	0	0	0	0	74.3559
950	0	160.33	0	0	0	0	224.23	0	0	0	315.62	0	0	0	0	700.18
954	397.01	2.89	0	0	0	0	0	0	0	0	0	0	0	0	0	399.9
955	237.56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	237.56
956	615.39	0	0	0	0	0	0	0	0	0	0	0	0	0	19.64	635.03
957	0.19	590.42	0	0	0	0.13	0	0.26	0	0	0	0	0	8.46	0	599.46
959	302.07	0	0	0	0	0	0	9.82	0	0	0	0	0	0	0	311.89
960	321.71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	321.71
961	0	225.58	0	0	0	0	0	0.21	0	4.61	166.98	0	0	18.99	0	416.37
962	0	11.59	0	0	0	0	0	16.53	0	0	0	0	0	0.33	0	28.45
963	0	191.07	0	0	0	0	9.33	0	0	0	3.61	0	0	2.88	0	206.89
964	0	75.2	0	0	0	0	0	0	0	0	0	0	0	0	0	75.2
965	0	219.98	0	0	0	0	0	0	0	0	0	0	0	2.97	0	222.95

APPENDIX B-2

LQTM POST 2020 EXISTING GENERAL PLAN LAND USE BY CVATS CATAGORIES

LA QUINTA TAZ	Very Low Density (0-2 du/ac)	Low Density (3-6 du/ac)	Med. (7 15 du/ac)	High (16-21 du/ac)	Very High (22+ du/ac)	Tourist, Resort/ Hotel	Park, Golf Cse., etc.	Gen. & Neigh. Comm., CBD, etc.	Public Facility	Gov. Bldgs. Health Care, etc.	Open Space, Agr., Water Courses	Light Ind	Heavy Ind.	Tranportation/ Utility	Schools (All levels)	TOTAL ACRES
632	73.23	1.28855	0	0	0	0	0	0.32	0	0	0	0	0	0	0	74.8385
635	28.66	30.06	0	0	0	0	0	12.5369	0	0	0	0	0	0	0	71.2569
648	101.08	0	0	0	0	0	0	0	0	0	0	0.31	0.31	0	0	101.7
651	0	38.34	0	0	0	0	0	0	34.295	0	0	23.5348	23.5348	34.29521786	0	154
655	0.03	180.62	0	0	0	0	0	0	0	0	0	1.37	1.37	0	0	183.39
656	49.1	118.27	0	0	0	0	0	0	0	0	0	0.01	0.01	0	0	167.39
659	51.19	19.8128	0	0	0	0	0	11.45	0	0	0	0	0	0	0	82.4528
660	55.62	23.05	0	0	0	0	0	0	0.4506	0	0	0	0	0	0	79.1206
685	0	126.52	1.97	0	0	0	18.64	0	0	0	0	0	0	0	0	147.13
686	0	219.23	0.38	0	0	0	61.9	0	0	0	0	0	0	0	0	281.51
687	0	124.85	0.59	0	0	0	0	16.79	0	0	0	0	0	0	9.23116	151.461
700	0	135.68	0	0	0	0	115.84	0	0	0	0	0	0	0	0	251.52
713	0	86.66	22.03	0	0	0	0	0	0	4.12	0	0	0	0	0	112.81
721	0	130.101	0	0	0	0	0	0	0	0	0	0	0	0	0	130.101
725	0	249.363	0	0	0	0	29.2251	0	0	0	0	0	0	0	0	278.589
728	0	132.485	12.07	0	0	0	0.08	32.8353	0	22.7192	0	0	0	0	0	200.19
734	0	52.93	0	0	0	0	0	0	0	0	0	0	0	0	0	52.93
741	0	157.831	0	0	0	0	0	0.63117	0	0	0	0	0	0	0	158.462
775	0	90.83	1.85	0	0	0	0.12	2.78309	0	0	0	0	0	21.79764233	51.16	168.541
803	0	0	0	0	0	0	0	38.37	0	0	0	31.76	0	0	0	70.13
810	0	72.78	0	0	0	0	13.22	0	0	0	0	0	0	28.37	0	114.37
818	0	0	0	0	0	0	0	41.58	0	0	0	0	0	0	0	41.58
881	0	0	0	0	0	0	0	30.01	0	0	0	0	0	0.33	0	30.34
885	0	1.49	0.1	0	0	0	0	94.31	0	0	0	0	0	0	0	95.9
889	0	20.2682	0	0	0	0	15.531	0.89464	0	0	0	0	0	10.84	0	47.5338
891	0	17.01	0	0	0	0	0	0.42	0	0	0	0	0	0	0	17.43
893	0	287.74	0	0	0	0	0	0.40952	0	0	94.82	0	0	0	0	382.97
896	0	0	0	0	0	0	0	122.54	0	0	0	0	0	0	0	122.54
899	0	107.79	14.43	0	0	0	0	37.99	0	0	0	0	0	0	0	160.21
903	0	0	0	0	0	0	0	0.56	0	0	0	0	0	0.09	0	0.65
904	0	0	0	0	0	0	0	55.06	0	0	0	31.88	0	0.45	0	87.39
912	0	0	0	0	0	0	0	34.58	0	0	0	0	0	8.66	0	43.24

LA QUINTA TAZ	Very Low Density (0-2 du/ac)	Low Density (3-6 du/ac)	Med. (7-15 du/ac)	High (16-21 du/ac)	Very High (22+ du/ac)	Tourist, Resort/ Hotel	Park, Golf Cse.,etc.	Gen. & Neigh. Commnl., CBD, etc.	Public Facility	Gov. Bldgs. Health Care, etc.	Open Space, Agr., Water Courses	Light Ind	Heavy Ind.	Tranportation/ Utility	Schools (All levels)	TOTAL ACRES
1009	70.47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70.47
1010	247.17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	247.17
1011	583.8	0	0	0	0	0	0	0	0	0	0.2	1.01	1.01	0	0	586.02
1012	0	1.79	1.49	0	0	0	0	84.85	0	2.73	207.82	0.01	0.01	0	0	298.7
1013	177.84	115.96	14.94	0	0	0	0	2.65	0	0	40.51	0	0	0	0	351.9
1014	638.62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	638.62
1016	31.31	4.28	236.9	0	0	0	150.53	0	0	0	0	0	0	0	0	423.02
1017	648.73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	648.73
1018	0	567.03	0	0	0	0.1	1.7	10.01	0	0	44.2393	0	0	0	0	623.079
1019	555.48	0	80.04	0	0	0	0	0	0	0	0	0	0	0	0	635.52
1020	62.14	0	0	0	0	0	0	0	0	0	19.96	65.42	65.42	0	0	212.94
1021	14.1	1.05	77.59	0	0	0	51.87	0	0	0	0	0	0	0	0	144.61
1022	0.47	147.64	0	0	0	0	0	25.4	0	0	37.23	0	0	0	0	210.74
1023	117.34	0	0	0	0	0	0	4.02	0	0	0	0	0	0	0	121.36
1024	10.27	69.33	0.31	0	0	0	0	0	0	0	0	0	0	0	0	79.91
1025	0	47.89	36.87	0	0	0	0	0	0	34.59	50.92	0	0	0	0	170.27
1026	0	29.13	0	0	0	0	0	6.58	0	6.46	64.77	79.95	79.95	0	0	266.84
1027	29.99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29.99
1028	514.65	0	0	0	0	0	0	6.51	0	0	0	0	0	0	0	521.16
1029	319.15	0	0	0	0	0	0	0.91	0	0	0	0	0	0	0	320.06
1030	345.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	345.8
1031	612.28	0	0	0	0	0	0	0	0	0	0.55	0.9	0.9	0	0	614.63
1032	85.23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85.23
1033	627.59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	627.59
1034	646.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	646.7
1035	652.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	652.02
1036	803.06	1.04	0	0	0	0	0	0	0	0	0	0	0	0	0	804.1
1037	172.78	879.28	0	0	0	0	194.13	0	0	0	357.27	0	0	0	0	1603.46
1038	0	907.26	0	0	0	0	0	0	32.175	0	324.35	263.0	0	0	0	1263.78
1039	50.91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50.91
1040	0	200.61	18.48	0	0	0	0	0	0	0	74.69	12.24	12.24	0	0	318.26
1041	355.51	0	0	0	0	0	0	26.4	0	0	0	0	0	0	0	381.91

LA QUINTA TAZ	Very Low Density (0-2 du/ac)	Low Density (3-6 du/ac)	Med. (7 15 du/ac)	High (16-21 du/ac)	Very High (22+ du/ac)	Tourist, Resort/ Hotel	Park, Golf Cse., etc.	Gen. & Neigh. Comm., CBD, etc.	Public Facility	Gov. Bldgs. Health Care, etc.	Open Space, Agr., Water Courses	Light Ind	Heavy Ind.	Tranportation/ Utility	Schools (All levels)	TOTAL ACRES
967	0	384.33	0	0	0	0	7.83	0	0	0	0	0	0	0.07	0	392.23
968	0	97.5	0	0	0	0	0.83	0	0	0	0	0	0	0	0	98.33
975	397.16	161.45	0	0	0	0	0	0	0	0	0	0	0	0	0	558.61
976	603.96	27.56	0	0	0	0	0	0	0	0	0	0	0	0	0	631.52
977	25.45	82.162	0	0	0	0	211.74	0	0	0	0	0	0	0	0	319.352
978	0	21.78	0	0	0	0	18.99	0	0	0	1066.62	0	0	61.61	0	1169
979	0.11	422	0	0	0	21.146	443.03	27.61	2.3496	0	0	0	0	0.98	0	917.226
982	251.34	0	0	0	0	0	0	0	0	0	0	0	0	0	18.63	269.97
983	622.48	0	0	0	0	0	0	0	0	0	0	0	0	0	9.04999	631.53
984	0	480.24	0	0	0	31.66	262.15	0	0	0	0	0	0	112.48	0	886.53
985	0.12	167.12	0	0	0	0.61	156.65	0	0	0	0	0	0	0	0	324.5
986	81.05	89.82	0	0	0	0	160.44	0	0	0	0	0	0	0	0	331.31
989	36.37	35.08	0	0	0	0	0	15.92	0	0	0	167.79	167.79	0	18.6263	441.576
990	35.05	0	0.05	0	0	0	0	1.61	1057.1	0	9.24	215.7	215.7	1057.12	0	2591.59
991	562.9	0	0	0	0	0	0	15.69	0	0	0	32.31	32.31	0	0	643.21
992	653.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	653.5
993	0	268.79	0	0	0	0	0.19	0	0	0	1629.7	0	0	0	0	1898.68
994	0	1.73	0	0	0	0	552.93	0	0	0	2.05	0	0	52.76	0	609.47
995	0	0	0	0	0	0	0	0	0	0	1344.89	0	0	30.93	0	1375.82
996	0	82.42	0	0	0	19.74	0.09	0	0	0	0	0	0	0	0	102.25
997	112.69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	112.69
998	702.48	0	0	0	0	0	0	0	0.92	0	0	0	0	0.92	0	704.32
999	52.2	0	0	0	0	0	0	0	0	0	0	80.02	80.02	0	0	212.24
1000	415.42	2.27	0	0	0	0	0	0	0	0	0	0	0	0	0	417.69
1001	647.09	0	0	0	0	0	0	0	0	0	0	0	0	0	0	647.09
1002	531.11	0	89.75	0	0	0	10.02	0	0	0	0	0	0	0	10.7142	641.594
1003	656.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	656.9
1004	4.75	198.47	0	0	0	0	128.52	0	0	0	0	0	0	0	0	331.74
1005	21	118.49	1.23	0	0	0	52.3745	39.97	0	0	0	0	0	0	0	233.065
1006	0	8.71	0	0	0	0	16.13	0	0	0	0	0	0	0	0	24.84
1007	3.14	49.35	0	0	0	0	0.2	0	0	0	0	0	0	0	0	52.69
1008	406.47	0	0	0	0	0	0	0.05	0	0	0	0	0	0	0	406.52

LQTM POST 2020 GENERAL PLAN HIGH ALTERNATIVE LAND USE BY CVATS CATAGORIES

LA QUINTA TAZ	Very Low Density (0-2 du/ac)	Low Density (3-6 du/ac)	Med. (7 15 du/ac)	High (16-21 du/ac)	Very High (22+ du/ac)	Tourist, Resort/ Hotel	Park, Golf Cse., etc.	Gen. & Neigh. Comm., CBD, etc.	Public Facility	Gov. Bldgs. Health Care, etc.	Open Space, Agr., Water Courses	Light Ind	Heavy Ind.	Tranportation/ Utility	Schools (All levels)	TOTAL ACRES
632	0	60.1964	0	0	0	0	0	0.32	0	0	0	7.16	7.16	0	0	74.8364
635	0	58.72	0	0	0	0	0	12.5369	0	0	0	0	0	0	0	71.2569
648	0	70.75	0	0	0	0	0	0	0	0	0	15.47	15.47	0	0	101.69
651	0	38.34	0	0	0	0	0	0	34.295	0	0	23.5348	23.5348	34.29521786	0	154
655	0	180.65	0	0	0	0	0	0	0	0	0	1.37	1.37	0	0	183.39
656	0	167.37	0	0	0	0	0	0	0	0	0	0.01	0.01	0	0	167.39
659	0	71.0049	0	0	0	0	0	11.45	0	0	0	0	0	0	0	82.4549
660	0	78.67	0	0	0	0	0	0	0.4506	0	0	0	0	0	0	79.1206
685	0	126.52	1.97	0	0	0	18.64	0	0	0	0	0	0	0	0	147.13
686	0	219.23	0.38	0	0	0	61.9	0	0	0	0	0	0	0	0	281.51
687	0	124.87	0.59	0	0	0	0	16.79	0	0	0	0	0	0	9.20682	151.457
700	0	135.59	0	0	0	0	115.93	0	0	0	0	0	0	0	0	251.52
713	0	86.66	22.03	0	0	0	0	0	0	4.12	0	0	0	0	0	112.81
721	0	130.102	0	0	0	0	0	0	0	0	0	0	0	0	0	130.102
725	0	242.83	0	0	0	0	29.2212	6.57653	0	0	0	0	0	0	0	278.627
728	0	132.446	12.07	0	0	0	0.07	32.8332	0	22.7192	0	0	0	0	0	200.139
734	0	52.93	0	0	0	0	0	0	0	0	0	0	0	0	0	52.93
741	0	157.471	0	0	0	0	0	1.05607	0	0	0	0	0	0	0	158.528
775	0	90.8014	1.37	0	0	0.7763	0.57	1.60404	0	0	0.52199	0	0	22.4836095	51.16	169.287
803	0	0	0	0	0	0	0	38.37	0	0	0	31.76	0	0	0	70.13
810	0	72.8	0	0	0	0	13.21	0	0	0	0	0	0	28.36	0	114.37
818	0	0	0	0	0	0	0	41.6	0	0	0	0	0	0	0	41.6
881	0	0	0	0	0	0	0	27.41	0	0	2.54	0	0	0.33	0	30.28
885	0	1.33	0	0	0	0	0	94.57	0	0	0	0	0	0	0	95.9
889	0	20.2682	0	0	0	0	15.531	0.89464	0	0	0	0	0	10.84	0	47.5338
891	0	8.62	0	0	0	0	0	5.51	0	0	3.15	0	0	0	0	17.28
893	0	275.4	0	0	0	0	0.32	0.43346	0	0	106.79	0	0	0.058799656	0	383.002
896	0	0	0	0	0	0	0	122.27	0	0	0	0	0	0	0	122.27
899	0	125.94	0	0	0	0	0	34.28	0	0	0	0	0	0	0	160.22
904	0	0	0	0	0	27.6	0	27.61	0	0	0	32	0	0.45	0	87.66
912	0	0	34.58	0	0	0	0	0	0	0	0	0	0	8.66	0	43.24
913	0	0	46.79	0	0	0	0	0	0	0	0	0	0	0	0	46.79

APPENDIX B-2

LQTM POST 2020 EXISTING GENERAL PLAN LAND USE BY CVATS CATAGORIES

LA QUINTA TAZ	Very Low Density (0-2 du/ac)	Low Density (3-6 du/ac)	Med. (7 15 du/ac)	High (16-21 du/ac)	Very High (22+ du/ac)	Tourist, Resort/ Hotel	Park, Golf Cse., etc.	Gen. & Neigh. Comm., CBD, etc.	Public Facility	Gov. Bldgs. Health Care, etc.	Open Space, Agr., Water Courses	Light Ind	Heavy Ind.	Tranportation/ Utility	Schools (All levels)	TOTAL ACRES
1042	658.65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	658.65
1043	102.58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	102.58
1044	539.33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	539.33
1045	621.71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	621.71
1046	598.79	0	0	0	0	0	0	12.76	0	0	0	0	0	0	0	611.55
1047	0	144.58	34.15	0	0	0	0	0	36.887	0	112.78	0	0	0	0	328.397
1048	618.45	10.47	0	0	0	0	0	17.44	0	0	0	0	0	0	0	646.36
1049	637.72	1.04841	0	0	0	0	0	1.34036	0	0	0	0	0	0	0	640.109
1050	0	0.46	0	0	0	0	0	0	0	0	1273.3	0	0	0	0	1273.76
1051	0	127.65	0	0	0	0	0	0	0	0	0	0	0	0	0	127.65
1052	0	204.14	56.22	0	0	0	0	18.53	0	0	29.62	0	0	0	0	308.51
1054	0.32	0	0	0	0	0	0	7.91156	0	0	0	0	0	0	0	8.23156
1056	276.84	39.8	0	0	0	0	0	0	0	0	0	0	0	0	0	316.64
1057	0	0	0	0	0	0	0	71.42	0	0	0	0.26	0	0	0	71.68
1058	0	0	0	0	0	50.31	0	0	0	0	0	0	0	32.03	0	82.34
1059	0	141.25	0	0	0	0.75	18.14	0	0	0	0	0	0	0	0	160.14
1060	0	0.97	49.11	0	0	0	2.6	0	0	0	0	0	0	7.88	0	60.56
1061	0	145.05	0	0	0	0	5.06	9.57	0	0	0	0	0	0	0	159.68
1062	0	1.32	0	0	0	34.05	2.17	0	0	0	0	0	0	11.43	0	48.97
TOTAL	19436.3	12497.1	765.16	0	0	306.85	3906.2	1187.35	1186.3	93.351	7854.66	744.475	680.575	1694.279327	132.412	50485

LQTM POST 2020 GENERAL PLAN HIGH ALTERNATIVE LAND USE BY CVATS CATAGORIES

LA QUINTA TAZ	Very Low Density (0-2 du/ac)	Low Density (3-6 du/ac)	Med. (7 15 du/ac)	High (16-21 du/ac)	Very High (22+ du/ac)	Tourist, Resort/ Hotel	Park, Golf Cse., etc.	Gen. & Neigh. Comm., CBD, etc.	Public Facility	Gov. Bldgs. Health Care, etc.	Open Space, Agr., Water Courses	Light Ind	Heavy Ind.	Tranportation/ Utility	Schools (All levels)	TOTAL ACRES
968	0	97.5	0	0	0	0	0.83	0	0	0	0	0	0	0	0	98.33
975	0	558.61	0	0	0	0	0	0	0	0	0	0	0	0	0	558.61
976	0	631.53	0	0	0	0	0	0	0	0	0	0	0	0	0	631.53
977	0	107.808	0	0	0	0	211.54	0	0	0	0	0	0	0	0	319.348
978	0	21.78	0	0	0	0	58.13	0	0	0	1027.52	0	0	61.55	0	1168.98
979	0	420.49	0	0	0	21.148	444.35	27.74	2.3497	0	0	0	0	0.98	0	917.057
982	0	0	0	0	0	0	0	0	0	0	0	126.418	126.418	0	18.63	271.466
983	0	603.52	0	0	0	0	0	19.35	0	0	0	0	0	0	9.04999	631.92
984	0	486.11	0	0	0	25.79	262.14	0	0	0	0	0	0	112.48	0	886.52
985	0	167.41	0	0	0	0.61	156.69	0	0	0	0	0	0	0	0	324.71
986	0	111.52	0	0	0	0	160.6	19.02	0	0	0	0	0	0	39.5864	330.726
989	0	19.57	0	0	0	0	0	31.42	0	0	0	185.66	185.66	0	18.6263	440.936
990	0	1.65	0.05	0	0	0	0	12.34	1057.1	0	9.24	227.04	227.04	1057.12	0	2591.6
991	0	494.06	0	0	0	0	0	84.53	0	0	0	32.31	32.31	0	0	643.21
992	0	653.5	0	0	0	0	0	0	0	0	0	0	0	0	0	653.5
993	0	268.79	0	0	0	0	205.79	0	0	0	1424.11	0	0	0	0	1898.69
994	0	1.73	0	0	0	0	552.93	0	0	0	2.05	0	0	52.76	0	609.47
995	0	0	0	0	0	0	0	0	0	0	1344.89	0	0	30.93	0	1375.82
996	0	82.42	0	0	0	19.74	0.09	0	0	0	0	0	0	0	0	102.25
997	0	0	0	0	0	0	0	0	0	0	0	56.35	56.35	0	0	112.7
998	0	703.07	0	0	0	0	0	0	0.92	0	0	0.01	0.01	0.92	0	704.93
999	0	49.35	0	0	0	0	0	0	0	0	0	81.46	81.46	0	0	212.27
1000	0	406.22	0	0	0	0	0	10.51	0	0	0	0	0	0	0.95055	417.681
1001	0	556.03	0	0	0	0	0	91.07	0	0	0	0	0	0	0	647.1
1002	0	520.94	89.75	0	0	0	9.99	10.21	0	0	0	0	0	0	10.7142	641.604
1003	0	656.9	0	0	0	0	0	0	0	0	0	0	0	0	0	656.9
1004	0	203.17	0	0	0	0	128.52	0	0	0	0	0	0	0	0	331.69
1005	0	139.51	1.23	0	0	0	52.3755	39.99	0	0	0	0	0	0	0	233.106
1006	0	8.71	0	0	0	0	16.13	0	0	0	0	0	0	0	0	24.84
1007	0	51.45	0	0	0	0	0.2	0	0	0	1.2	0	0	0	0	52.85
1008	0	405.48	0	0	0	0	0	0.05	0	0	0	0.48	0.48	0	0	406.49
1009	0	0	0	0	0	0	0	0	0	0	0	35.24	35.24	0	0	70.48

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LQTM POST 2020 GENERAL PLAN HIGH ALTERNATIVE LAND USE BY CVATS CATAGORIES

LA QUINTA TAZ	Very Low Density (0-2 du/ac)	Low Density (3-6 du/ac)	Med. (7 15 du/ac)	High (16-21 du/ac)	Very High (22+ du/ac)	Tourist, Resort/ Hotel	Park, Golf Cse., etc.	Gen. & Neigh. Comm., CBD, etc.	Public Facility	Gov. Bldgs. Health Care, etc.	Open Space, Agr., Water Courses	Light Ind	Heavy Ind.	Tranportation/ Utility	Schools (All levels)	TOTAL ACRES
914	0	78.3	0	0	0	59.67	162.79	0	0	0	253.27	0	0	0.37	0	554.4
923	0	246.672	2.68	0	0	0	206.292	15.84	0	0	0	0	0	25.49806876	0	496.982
924	0	258.66	0.39	0	0	0	143.34	0.34	19.05	0	0	0	0	5.46	15	442.24
925	0	182.95	0	0	0	0	128.67	0	0	0	0	0	0	0	0	311.62
927	0	65.09	0.21	0	0	62.62	58.33	0.43	0	0	0	0	0	24.79	0	211.47
932	0	318.03	0	0	0	0	0	0	0	0	0	0	0	0	0	318.03
933	0	92.58	14.4	0	0	7.36	29.57	58.03	0	12.45	0	0	0	28.42	0	242.81
934	0	0	0	0	0	0	0.08	0	0	12.11	0	0	0	0.76	0	12.95
935	0	159.91	0	0	0	0.19	37.68	0.22	0	0.78	0	0	0	7.9	0	206.68
936	0	322.53	0	0	0	0	0	0	0	0	0	0	0	0	0	322.53
937	0	103.76	0	0	0	80.69	2.44	0.42	0	0	0	0	0	0	0	187.31
938	0	387.53	0.37	0	0	0	0	30.24	0	0	0	0	0	0	0	418.14
940	0	46.81	0	0	0	0	0	0	0	0	0	0	0	3.77	0	50.58
942	0	146.857	0	0	0	0	0.13	0	0	0	0	0	0	20.94	0	167.927
943	0	239.43	0	0	0	0	271.73	15.27	0	0	0.47	0	0	0	0	526.9
945	0	61.95	0	0	0	0	24.04	34.25	22.062	0	0	0	0	0	0	142.302
946	0	170.38	0	0	0	0	0.12	0.68	0	0	4.09	0	0	3.67	0	178.94
947	0	5.19	0	0	0	0	29.07	0	0	0	322.6	0	0	65.92	0	422.78
948	0	46.33	0	0	0	0	6.69	20.74	0	0.59827	0	0	0	0	0	74.3583
950	0	160.17	0	0	0	0	224.38	0	0	0	315.66	0	0	0	0	700.21
954	0	124.85	0	0	0	0	255.91	0	0	0	0	0	0	0	19.5505	400.31
955	0	236.81	0	0	0	0	0.3	0	0	0	0	0	0	0	0	237.11
956	0	615.11	0	0	0	0	0	0	0	0	0	0	0	0	19.64	634.75
957	0	197.38	0.18	0	0	0.31	383.48	10.28	0	0	0	0	0	8.45	0	600.08
959	0	302.07	0	0	0	0	0	9.82	0	0	0	0	0	0	0	311.89
960	0	321.71	0	0	0	0	0	0	0	0	0	0	0	0	0	321.71
961	0	0	0	0	0	101.61	135.91	0.28	0	0	159.9	0	0	18.99	0	416.69
962	0	0	11.52	0	0	0	0	16.37	0	0	0	0	0	0.33	0	28.22
963	0	191.07	0	0	0	0	9.33	0	0	0	3.61	0	0	2.88	0	206.89
964	0	75.2	0	0	0	0	0	0	0	0	0	0	0	0	0	75.2
965	0	0	0	0	0	49.5	170.49	0	0	0	0	0	0	2.97	0	222.96
967	0	384.33	0	0	0	0	7.83	0	0	0	0	0	0	0.07	0	392.23

LQTM POST 2020 GENERAL PLAN HIGH ALTERNATIVE LAND USE BY CVATS CATAGORIES

LA QUINTA TAZ	Very Low Density (0-2 du/ac)	Low Density (3-6 du/ac)	Med. (7 15 du/ac)	High (16-21 du/ac)	Very High (22+ du/ac)	Tourist, Resort/ Hotel	Park, Golf Cse., etc.	Gen. & Neigh. Comm., CBD, etc.	Public Facility	Gov. Bldgs. Health Care, etc.	Open Space, Agr., Courses	Light Ind	Heavy Ind.	Tranportation/ Utility	Schools (All levels)	TOTAL ACRES
1043	0	102.58	0	0	0	0	0	0	0	0	0	0	0	0	0	102.58
1044	0	539.33	0	0	0	0	0	0	0	0	0	0	0	0	0	539.33
1045	0	621.71	0	0	0	0	0	0	0	0	0	0	0	0	0	621.71
1046	0	598.8	0	0	0	0	0	12.76	0	0	0	0	0	0	0	611.56
1047	0	144.58	34.15	0	0	0	0	0	36.887	0	112.78	0	0	0	0	328.397
1048	0	628.93	0	0	0	0	0	17.43	0	0	0	0	0	0	0	646.36
1049	0	642.747	0	0	0	0	0	1.34036	0	0	0	0	0	0	0	644.087
1050	0	0.46	0	0	0	0	0	0	0	0	1273.3	0	0	0	0	1273.76
1051	0	127.67	0	0	0	0	0	0	0	0	0	0	0	0	0	127.67
1052	0	204.14	56.22	0	0	0	0	18.53	0	0	29.62	0	0	0	0	308.51
1054	0	0	0	0	0	0	0	7.91156	0	0	0	0.16	0.16	0	0	8.23156
1056	0	316.65	0	0	0	0	0	0	0	0	0	0	0	0	0	316.65
1057	0	0	0	0	0	0	0	71.42	0	0	0	0.26	0	0	0	71.68
1058	0	0	0	0	0	50.31	0	0	0	0	0	0	0	32.03	0	82.34
1059	0	141.25	0	0	0	0.75	18.14	0	0	0	0	0	0	0	0	160.14
1060	0	0.62	32.24	0	0	10.93	8.56	0.35	0	0	0	0	0	7.88	0	60.58
1061	0	136.14	0	0	0	0	5.06	18.41	0	0	0	0	0	0	0	159.61
1062	0	1.31	0	0	0	34.06	2.17	0	0	0	0	0	0	11.43	0	48.97
TOTAL	0	28960.1	913.13	0	0	553.76	5622.24	1361.83	1205.3	96.5575	7901.38	1036.11	972.093	1694.745696	192.475	50509.7

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APPENDIX B-3

LQTM POST 2020 GENERAL PLAN HIGH ALTERNATIVE LAND USE BY CVATS CATAGORIES

LA QUINTA TAZ	Very Low Density (0-2 du/ac)	Low Density (3-6 du/ac)	Med. (7 15 du/ac)	High (16-21 du/ac)	Very High (22+ du/ac)	Tourist, Resort/ Hotel	Park, Golf Cse., etc.	Gen. & Neigh. Comm., CBD, etc.	Public Facility	Gov. Bldgs. Health Care, etc.	Open Space, Agr., Water Courses	Light Ind	Heavy Ind.	Tranportation/ Utility	Schools (All levels)	TOTAL ACRES
1010	0	247.17	0	0	0	0	0	0	0	0	0	0	0	0	0	247.17
1011	0	583.8	0	0	0	0	0	0	0	0	0.2	1.01	1.01	0	0	586.02
1012	0	1.79	1.49	0	0	0	0	84.86	0	2.73	207.82	0.01	0.01	0	0	298.71
1013	0	293.79	14.94	0	0	0	0	2.65	0	0	40.51	0	0	0	0	351.89
1014	0	638.62	0	0	0	0	0	0	0	0	0	0	0	0	0	638.62
1016	0	35.59	236.72	0	0	0	150.41	0	0	0	0	0	0	0	0	422.72
1017	0	648.73	0	0	0	0	0	0	0	0	0	0	0	0	0	648.73
1018	0	289.12	14.48	0	0	0.1	157.74	10.01	0	0	151.884	0	0	0	0	623.334
1019	0	555.48	80.04	0	0	0	0	0	0	0	0	0	0	0	0	635.52
1020	0	62.14	0	0	0	0	0	0	0	0	19.95	65.42	65.42	0	0	212.93
1021	0	14.1	77.62	0	0	0	51.99	0	0	0	1.05	0	0	0	0	144.76
1022	0	148.11	0	0	0	0	0	25.4	0	0	37.23	0	0	0	0	210.74
1023	0	112.54	0	0	0	0	0	4.02	0	0	0	2.4	2.4	0	0	121.36
1024	0	36.18	0.31	0	0	0	0	0	0	0	43.42	0	0	0	0	79.91
1025	0	47.89	36.86	0	0	0	0	0	0	34.59	50.92	0	0	0	0	170.26
1026	0	29.13	0	0	0	0	0	6.58	0	6.46	64.77	79.95	79.95	0	0	266.84
1027	0	0	0	0	0	0	0	0	0	0	0	15	15	0	0	30
1028	0	489.29	0	0	0	0	0	26.91	0	0	0	2.48	2.48	0	0	521.16
1029	0	319.15	0	0	0	0	0	0.91	0	0	0	0	0	0	0	320.06
1030	0	345.8	0	0	0	0	0	0	0	0	0	0	0	0	0	345.8
1031	0	612.28	0	0	0	0	0	0	0	0	0.55	0.9	0.9	0	0	614.63
1032	0	85.24	0	0	0	0	0	0	0	0	0	0	0	0	0	85.24
1033	0	627.59	0	0	0	0	0	0	0	0	0	0	0	0	0	627.59
1034	0	646.7	0	0	0	0	0	0	0	0	0	0	0	0	0	646.7
1035	0	652.03	0	0	0	0	0	0	0	0	0	0	0	0	0	652.03
1036	0	803.85	0	0	0	0	0	0	0	0	0.25	0	0	0	0	804.1
1037	0	922.87	0	0	0	0	194.13	0	0	0	486.47	0	0	0	0	1603.47
1038	0	608.21	69.02	0	0	0	229.74	0	32.175	0	324.35	0	0	0	0	1263.49
1039	0	50.68	0	0	0	0	0	0.2	0	0	0	0.01	0.01	0	0	50.9
1040	0	200.61	18.48	0	0	0	0	0	0	0	74.69	12.24	12.24	0	0	318.26

LA QUINTA TAZ	Very Low Density (0-2 du/ac)	Low Density (3-6 du/ac)	Med. (7 15 du/ac)	High (16-21 du/ac)	Very High (22+ du/ac)	Tourist, Resort/ Hotel	Park, Golf Cse.,etc.	Gen. & Neigh. Comm., CBD, etc.	Public Facility	Gov. Bldgs. Health Care, etc.	Open Space, Agr., Water Courses	Light Ind	Heavy Ind.	Tranportation/ Utility	Schools (All levels)	TOTAL ACRES
914	0	136.47	0	0	0	1.5	162.79	0	0	0	253.28	0	0	0.37	0	554.4
923	225.76	21.2299	0	0	0	0	206.292	15.84		0	0	0	0	25.49806876	0	494.62
924	0	259.14	0	0	0	0	143.34	0.34	19.05	0	0	0	0	5.46	15	442.33
925	0	182.95	0	0	0	0	128.65	0	0	0	0	0	0	0	0	311.6
927	0	65.06	0.19	0	0	62.65	58.32	0.42	0	0	0	0	0	24.78	0	211.42
932	299.65	18.38	0	0	0	0	0	0	0	0	0	0	0	0	0	318.03
933	0.01	92.59	14.42	0	0	7.36	29.62	58.04	0	12.45	0	0	0	28.43	0	242.92
934	0	0	0	0	0	0	0.08	0	0	12.02	0	0	0	0.76	0	12.86
935	88.21	71.7	0	0	0	0.19	37.69	0.22	0	0.78	0	0	0	7.9	0	206.69
936	253.94	68.59	0	0	0	0	0	0	0	0	0	0	0	0	0	322.53
937	103.76	0	0	0	0	80.69	2.44	0.42	0	0	0	0	0	0	0	187.31
938	387.9	0	0	0	0	0	0	30.24	0	0	0	0	0	0	0	418.14
940	46.81	0	0	0	0	0	0	0	0	0	0	0	0	3.77	0	50.58
942	146.857	0	0	0	0	0	0.13	0	0	0	0	0	0	20.94	0	167.927
943	145.64	93.78	0	0	0	0	271.73	15.27	0	0	0.47	0	0	0	0	526.89
945	18.83	43.12	0	0	0	0	24.04	34.25	22.062	0	0	0	0	0	0	142.302
946	0	170.33	0	0	0	0	0.12	0.68	0	4.09	0	0	0	3.67	0	178.89
947	0	5.19	0	0	0	0	29.07	0	0	0	322.6	0	0	65.92	0	422.78
948	0	46.33	0	0	0	0	6.69	20.74	0	0.59827	0	0	0	0	0	74.3583
950	131.53	28.65	0	0	0	0	224.38	0	0	0	315.65	0	0	0	0	700.21
954	144.39	0	0	0	0	0	255.78	0	0	0	0	0	0	0	0	400.17
955	236.95	0	0	0	0	0	0.3	0	0	0	0	0	0	0	0	237.25
956	615.11	0	0	0	0	0	0	0	0	0	0	0	0	0	19.64	634.75
957	207.76	0.02	0	0	0	0.13	383.49	0.26	0	0	0	0	0	8.45	0	600.11
959	302.07	0	0	0	0	0	0	9.82	0	0	0	0	0	0	0	311.89
960	321.71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	321.71
961	0	101.61	0	0	0	0	135.91	0.28	0	0	159.9	0	0	18.99	0	416.69
962	11.52	0	0	0	0	0	0	16.37	0	0	0	0	0	0.33	0	28.22
963	0	191.07	0	0	0	0	9.33	0	0	0	3.61	0	0	2.88	0	206.89
964	0	75.2	0	0	0	0	0	0	0	0	0	0	0	0	0	75.2
965	0	49.5	0	0	0	0	170.49	0	0	0	0	0	0	2.97	0	222.96
967	0	384.33	0	0	0	0	7.83	0	0	0	0	0	0	0.07	0	392.23

APPENDIX B-4

LQTM POST 2020 GENERAL PLAN LOW ALTERNATIVE LAND USE BY CVATS CATAGORIES

LA QUINTA TAZ	Very Low Density (0-2 du/ac)	Low Density (3-6 du/ac)	Med. (7 15 du/ac)	High (16-21 du/ac)	Very High (22+ du/ac)	Tourist Resort/ Hotel	Park, Golf Cse., etc.	Gen. & Neigh. Comm., CBD, etc.	Public Facility	Gov. Bldgs. Health Care, etc.	Open Space, Agr., Water Courses	Light Ind	Heavy Ind.	Tranportation/ Utility	Schools (All levels)	TOTAL ACRES
632	58.91	1.28855	0	0	0	0	0	0.32	0	0	0	7.16	7.16	0	0	74.8385
635	28.66	30.06	0	0	0	0	0	12.5369	0	0	0	0	0	0	0	71.2569
648	70.75	0	0	0	0	0	0	0	0	0	0	15.47	15.47	0	0	101.69
651	0	38.34	0	0	0	0	0	0	34.295	0	0	23.5348	23.5348	34.29521786	0	154
655	0.03	180.62	0	0	0	0	0	0	0	0	0	1.37	1.37	0	0	183.39
656	49.1	118.27	0	0	0	0	0	0	0	0	0	0.01	0.01	0	0	167.39
659	51.19	19.8128	0	0	0	0	0	11.45	0	0	0	0	0	0	0	82.4528
660	55.62	23.05	0	0	0	0	0	0	0.4506	0	0	0	0	0	0	79.1206
685	0	126.52	1.97	0	0	0	18.64	0	0	0	0	0	0	0	0	147.13
686	0	219.23	0.38	0	0	0	61.9	0	0	0	0	0	0	0	0	281.51
687	0	124.87	0.59	0	0	0	0	16.79	0	0	0	0	0	0	9.20682	151.457
700	0	135.59	0	0	0	0	115.93	0	0	0	0	0	0	0	0	251.52
713	0	86.66	22.03	0	0	0	0	0	0	4.12	0	0	0	0	0	112.81
721	0	130.101	0	0	0	0	0	0	0	0	0	0	0	0	0	130.101
725	0	249.796	0	0	0	0	29.2397	6.57653	0	0	0	0	0	0	0	285.612
728	0	125.462	12.07	0	0	0	0.07	32.8332	0	22.7192	0	0	0	0	0	193.154
734	0	52.93	0	0	0	0	0	0	0	0	0	0	0	0	0	52.93
741	0	157.831	0	0	0	0	0	0.63117	0	0	0	0	0	0	0	158.462
775	0	92.2442	0	0	0	0.7763	0.57	1.60404	0	0	0.52199	0	0	22.4836095	51.16	169.36
803	0	0	0	0	0	0	0	38.37	0	0	0	31.76	0	0	0	70.13
810	0	72.8	0	0	0	0	13.21	0	0	0	0	0	0	28.36	0	114.37
818	0	0	0	0	0	0	0	41.6	0	0	0	0	0	0	0	41.6
881	0	0	0	0	0	0	0	27.41	0	0	2.54	0	0	0.33	0	30.28
885	0	1.33	0	0	0	0	0	94.58	0	0	0	0	0	0	0	95.91
889	0	20.2682	0	0	0	0	15.531	0.89464	0	0	0	0	0	10.84	0	47.5338
891	0	8.62	0	0	0	0	0	5.51	0	0	3.15	0	0	0	0	17.28
893	0	275.39	0	0	0	0	0.32	0.4345	0	0	106.79	0	0	0.058799656	0	382.993
896	0	0	0	0	0	0	0	122.54	0	0	0	0	0	0	0	122.54
899	0	125.94	0	0	0	0	0	34.28	0	0	0	0	0	0	0	160.22
904	0	0	0	0	0	27.52	0	27.55	0	0	0	31.88	0	0.45	0	87.4
912	0	34.58	0	0	0	0	0	0	0	0	0	0	0	8.66	0	43.24
913	0	46.79	0	0	0	0	0	0	0	0	0	0	0	0	0	46.79

APPENDIX B-4

LQTM POST 2020 GENERAL PLAN LOW ALTERNATIVE LAND USE BY CVATS CATAGORIES

LA QUINTA TAZ	Very Low Density (0-2 du/ac)	Low Density (3-6 du/ac)	Med. (7 15 du/ac)	High (16-21 du/ac)	Very High (22+ du/ac)	Tourist, Resort/ Hotel	Park, Golf Cse., etc.	Gen. & Neigh. Comm., CBD, etc.	Public Facility	Gov. Bldgs. Health Care, etc.	Open Space, Agr., Water Courses	Light Ind	Heavy Ind.	Tranportation/ Utility	Schools (All levels)	TOTAL ACRES
1010	247.17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	247.17
1011	583.8	0	0	0	0	0	0	0	0	0	0.2	1.01	1.01	0	0	586.02
1012	0	1.79	1.49	0	0	0	0	84.86	0	2.73	207.82	0.01	0.01	0	0	298.71
1013	177.85	115.94	14.94	0	0	0	0	2.65	0	0	40.51	0	0	0	0	351.89
1014	638.62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	638.62
1016	31.31	4.28	236.9	0	0	0	150.53	0	0	0	0	0	0	0	0	423.02
1017	648.73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	648.73
1018	0	289.12	14.48	0	0	0.1	157.74	10.01	0	0	151.885	0	0	0	0	623.335
1019	555.48	0	80.04	0	0	0	0	0	0	0	0	0	0	0	0	635.52
1020	62.14	0	0	0	0	0	0	0	0	0	19.95	65.42	65.42	0	0	212.93
1021	14.1	0	77.59	0	0	0	51.87	0	0	0	1.05	0	0	0	0	144.61
1022	0.47	147.64	0	0	0	0	0	25.4	0	0	37.23	0	0	0	0	210.74
1023	112.54	0	0	0	0	0	0	4.02	0	0	0	2.4	2.4	0	0	121.36
1024	36.18	0	0.31	0	0	0	0	0	0	0	43.42	0	0	0	0	79.91
1025	0	47.89	36.87	0	0	0	0	0	0	34.59	50.92	0	0	0	0	170.27
1026	0	29.05	0	0	0	0	0	6.58	0	6.46	64.68	79.86	79.86	0	0	266.49
1027	0	0	0	0	0	0	0	0	0	0	0	15	15	0	0	30
1028	509.69	0	0	0	0	0	0	6.51	0	0	0	2.48	2.48	0	0	521.16
1029	319.15	0	0	0	0	0	0	0.91	0	0	0	0	0	0	0	320.06
1030	345.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	345.8
1031	612.28	0	0	0	0	0	0	0	0	0	0.55	0.9	0.9	0	0	614.63
1032	85.23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85.23
1033	627.59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	627.59
1034	646.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	646.7
1035	652.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	652.03
1036	803.84	0	0	0	0	0	0	0	0	0	0.25	0	0	0	0	804.09
1037	922.87	0	0	0	0	0	194.13	0	0	0	486.47	0	0	0	0	1603.47
1038	0	608.21	69.02	0	0	0	229.74	0	32.175	0	324.35	0	0	0	0	1263.49
1039	50.89	0	0	0	0	0	0	0	0	0	0	0.01	0.01	0	0	50.91
1040	0	200.73	18.48	0	0	0	0	0	0	0	74.76	12.32	12.32	0	0	318.61
1041	355.5	0	0	0	0	0	0	26.4	0	0	0	0	0	0	0	381.9
1042	658.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	658.9

APPENDIX B-4

LQTM POST 2020 GENERAL PLAN LOW ALTERNATIVE LAND USE BY CVATS CATAGORIES

LA QUINTA TAZ	Very Low Density (0-2 du/ac)	Low Density (3-6 du/ac)	Med. (7 15 du/ac)	High (16-21 du/ac)	Very High (22+ du/ac)	Tourist, Resort/ Hotel	Park, Golf Cse., etc.	Gen. & Neigh. Comm., CBD, etc.	Public Facility	Gov. Bldgs. Health Care, etc.	Open Space, Agr., Water Courses	Light Ind	Heavy Ind.	Tranportation/ Utility	Schools (All levels)	TOTAL ACRES
968	0	97.5	0	0	0	0	0.83	0	0	0	0	0	0	0	0	98.33
975	397.16	161.45	0	0	0	0	0	0	0	0	0	0	0	0	0	558.61
976	603.96	27.56	0	0	0	0	0	0	0	0	0	0	0	0	0	631.52
977	25.62	82.1853	0	0	0	0	211.54	0	0	0	0	0	0	0	0	319.345
978	21.1	0.68	0	0	0	0	58.13	0	0	0	1027.52	0	0	61.55	0	1168.98
979	0.11	420.38	0	0	0	21.147	444.35	27.74	2.3497	0	0	0	0	0.98	0	917.057
982	0	0	0	0	0	0	0	0	0	0	0	126.418	126.418	0	18.63	271.466
983	603.2	0	0	0	0	0	0	19.27	0	0	0	0	0	0	9.04999	631.52
984	0	486.12	0	0	0	25.79	262.16	0	0	0	0	0	0	112.46	0	886.53
985	0	167.41	0	0	0	0.61	156.69	0	0	0	0	0	0	0	0	324.71
986	0	111.91	0	0	0	0	160.6	19.02	0	0	0	0	0	0	39.5864	331.116
989	19.57	0	0	0	0	0	0	31.42	0	0	0	185.66	185.66	0	18.6263	440.936
990	1.65	0	0.05	0	0	0	0	12.34	1057.1	0	9.24	227.04	227.04	1057.12	0	2591.6
991	494.06	0	0	0	0	0	0	84.53	0	0	0	32.31	32.31	0	0	643.21
992	653.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	653.5
993	0	268.79	0	0	0	0	205.79	0	0	0	1424.11	0	0	0	0	1898.69
994	0	1.73	0	0	0	0	552.93	0	0	0	2.05	0	0	52.75	0	609.46
995	0	0	0	0	0	0	0	0	0	0	1344.89	0	0	30.93	0	1375.82
996	0	82.42	0	0	0	19.74	0.09	0	0	0	0	0	0	0	0	102.25
997	0	0	0	0	0	0	0	0	0	0	0	56.35	56.35	0	0	112.7
998	703.07	0	0	0	0	0	0	0	0.92	0	0	0.01	0.01	0.92	0	704.93
999	49.35	0	0	0	0	0	0	0	0	0	0	81.46	81.46	0	0	212.27
1000	0	406.22	0	0	0	0	0	10.51	0	0	0	0	0	0	0.95055	417.681
1001	556.03	0	0	0	0	0	0	91.07	0	0	0	0	0	0	0	647.1
1002	519.25	1.69	89.75	0	0	0	9.99	10.21	0	0	0	0	0	0	10.7142	641.604
1003	656.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	656.9
1004	0	203.16	0	0	0	0	128.52	0	0	0	0	0	0	0	0	331.68
1005	0	139.51	1.23	0	0	0	52.3755	39.99	0	0	0	0	0	0	0	233.106
1006	0	8.71	0	0	0	0	16.13	0	0	0	0	0	0	0	0	24.84
1007	0	51.31	0	0	0	0	0.2	0	0	0	1.2	0	0	0	0	52.71
1008	405.48	0	0	0	0	0	0	0.05	0	0	0	0.48	0.48	0	0	406.49
1009	0	0	0	0	0	0	0	0	0	0	0	35.24	35.24	0	0	70.48

APPENDIX C

POST 2020 GENERAL PLAN FUTURE DAILY FORECASTS AND VOLUME-TO-CAPACITY RATIOS

APPENDIX B-4

LQTM POST 2020 GENERAL PLAN LOW ALTERNATIVE LAND USE BY CVATS CATAGORIES

LA QUINTA TAZ	Very Low Density (0-2 du/ac)	Low Density (3-6 du/ac)	Med. (7 15 du/ac)	High (16-21 du/ac)	Very High (22+ du/ac)	Tourist, Resort/ Hotel	Park, Golf Cse., etc.	Gen. & Neigh. Comm., CBD, etc.	Public Facility	Gov. Bldgs. Health Care, etc.	Open Space, Agr., Water Courses	Light Ind	Heavy Ind.	Tranportation/ Utility	Schools (All levels)	TOTAL ACRES
1043	102.58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	102.58
1044	539.33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	539.33
1045	621.71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	621.71
1046	598.8	0	0	0	0	0	0	12.76	0	0	0	0	0	0	0	611.56
1047	0	144.58	34.15	0	0	0	0	0	36.887	0	112.78	0	0	0	0	328.397
1048	618.43	10.5	0	0	0	0	0	17.43	0	0	0	0	0	0	0	646.36
1049	638.75	0	0	0	0	0	0	1,340.36	0	0	0	0	0	0	0	640.09
1050	0.46	0	0	0	0	0	0	0	0	0	1273.3	0	0	0	0	1273.76
1051	127.67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	127.67
1052	0	204.14	56.22	0	0	0	0	18.53	0	0	29.62	0	0	0	0	308.51
1054	0	0	0	0	0	0	0	7,911.56	0	0	0	0.16	0.16	0	0	8,231.56
1056	276.85	39.8	0	0	0	0	0	0	0	0	0	0	0	0	0	316.65
1057	0	0	0	0	0	0	0	71.42	0	0	0	0.26	0	0	0	71.68
1058	0	0	0	0	0	50.31	0	0	0	0	0	0	0	32.03	0	82.34
1059	0	141.25	0	0	0	0.75	18.14	0	0	0	0	0	0	0	0	160.14
1060	0	32.86	0	0	0	10.93	8.56	0.35	0	0	0	0	0	7.88	0	60.58
1061	0	145.05	0	0	0	0	5.06	9.57	0	0	0	0	0	0	0	159.68
1062	1.31	0	0	0	0	34.06	2.17	0	0	0	0	0	0	11.43	0	48.97
TOTAL	20143.8	9209.22	783.17	0	0	344.25	5622.19	1322.08	1205.3	96.4675	7901.36	1035.98	972.083	1694.715696	172.924	50503.6

APPENDIX C-1

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN RECOMMENDED ALTERNATIVE FUTURE DAILY FORECAST

Seg. ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
293	Jefferson St.	Ave. 50	Ave. 52	MAJOR	6D	57,000	8,100	30,839	0.54	
294	Jefferson St.	Ave. 52	Ave. 54	MAJOR	6D	57,000	9,200	47,199	0.83	NEAR CAPACITY
295	Madison St.	Ave. 42	Indio Ave.	PRIMARY	4D	38,000	N/A	22,099	0.58	
296	Madison St.	Indio Ave.	Fred Waring Dr.	PRIMARY	4D	38,000	573	14,209	0.37	
297	Madison St.	Fred Waring Dr.	Miles Ave.	SECONDARY	4U	28,000	7,782	12,657	0.45	
298	Madison St.	Miles Ave.	Hwy. 111	SECONDARY	4U	28,000	7,782	9,955	0.36	
299	Madison St.	Hwy. 111	Ave. 48	PRIMARY	4D	38,000	6,664	35,802	0.94	NEAR CAPACITY
300	Madison St.	Ave. 48	Ave. 50	PRIMARY	4D	38,000	N/A	33,778	0.89	NEAR CAPACITY
301	Madison St.	Ave. 50	Ave. 52	PRIMARY	4D	38,000	464	28,211	0.74	
302	Madison St.	Ave. 52	Ave. 54	PRIMARY	4D	38,000	N/A	25,753	0.68	
303	Madison St.	Ave. 54	Airport Blvd.	MAJOR	6D	57,000	2,309	43,956	0.77	
304	Madison St.	Airport Blvd.	Ave. 58	MAJOR	6D	57,000	1,900	41,950	0.74	
305	Madison St.	Ave. 58	Ave. 60	SECONDARY	4U	28,000	400	17,360	0.62	
306	Not Used									
307	Ave. 62	W. of Madison St.		SECONDARY	4U	28,000	N/A	8,576	0.31	
308	Monroe St.	Ave. 42	I-10	PRIMARY	4D	38,000	11,000	19,762	0.52	
309	Monroe St.	I-10	Indio Ave.	PRIMARY	4D	38,000	N/A	32,649	0.86	NEAR CAPACITY
310	Monroe St.	Indio Ave.	Miles Ave.	PRIMARY	4D	38,000	N/A	34,973	0.92	NEAR CAPACITY
311	Monroe St.	Miles Ave.	Hwy. 111	PRIMARY	4D	38,000	18,400	39,088	1.03	OVER CAPACITY
312	Monroe St.	Hwy. 111	Ave. 48	PRIMARY	4D	38,000	N/A	25,807	0.68	
313	Monroe St.	Ave. 48	Ave. 50	PRIMARY	4D	38,000	9,000	24,772	0.65	
314	Monroe St.	Ave. 50	Ave. 52	PRIMARY	4D	38,000	4,700	27,205	0.72	
315	Monroe St.	Ave. 52	Ave. 54	PRIMARY	4D	38,000	3,100	22,393	0.59	
316	Monroe St.	Ave. 54	Airport Blvd.	PRIMARY	4D	38,000	2,200	24,164	0.64	
317	Monroe St.	Airport Blvd.	Ave. 58	PRIMARY	4D	38,000	2,200	13,473	0.35	
318	Monroe St.	Ave. 58	Ave. 60	PRIMARY	4D	38,000	1,100	12,318	0.32	
319	Monroe St.	Ave. 60	Ave. 62	SECONDARY	4U	28,000	1,100	12,406	0.44	
320	Jackson St.	Ave. 42	I-10	PRIMARY	4D	38,000	N/A	17,566	0.46	
321	Jackson St.	I-10	Indio Ave.	PRIMARY	4D	38,000	5,400	31,734	0.84	NEAR CAPACITY
322	Jackson St.	Indio Ave.	Hwy. 111	PRIMARY	4D	38,000	N/A	39,088	1.03	OVER CAPACITY
323	Jackson St.	Hwy. 111	Ave. 48	PRIMARY	4D	38,000	9,500	25,807	0.68	
324	Jackson St.	Ave. 48	Ave. 50	PRIMARY	4D	38,000	7,200	12,024	0.32	
325	Jackson St.	Ave. 50	Ave. 52	PRIMARY	4D	38,000	5,900	10,650	0.28	

APPENDIX C-1

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN RECOMMENDED ALTERNATIVE FUTURE DAILY FORECAST

Seg. ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
260	Washington St.	N. of Varner Rd.		MAJOR	6D	57,000	7,109	32,459	0.57	
261	Washington St.	I-10 Fwy.	Country Club Dr.	AUG. MAJOR	8D	76,000	24,000	75,838	1.00	NEAR CAPACITY
262	Washington St.	Country Club Dr.	42nd St.	MAJOR	6D	57,000	24,000	52,745	0.93	NEAR CAPACITY
263	Washington St.	42nd St.	Ave. 44	MAJOR	6D	57,000	27,000	54,929	0.96	NEAR CAPACITY
264	Washington St.	Ave. 44	Miles Ave.	MAJOR	6D	57,000	25,250	68,392	1.20	OVER CAPACITY
265	Washington St.	Miles Ave.	Hwy. 111	MAJOR	6D	57,000	23,500	65,518	1.15	OVER CAPACITY
266	Washington St.	Hwy. 111	Ave. 48	AUG. MAJOR	8D	76,000	29,500	67,202	0.88	NEAR CAPACITY
267	Washington St.	Ave. 48	Eisenhower Dr.	AUG. MAJOR	8D	76,000	25,600	62,551	0.82	NEAR CAPACITY
268	Washington St.	Eisenhower Dr.	Ave. 50	MAJOR	6D	57,000	21,700	53,233	0.93	NEAR CAPACITY
269	Washington St.	Ave. 50	Calle Tampico	MAJOR	6D	57,000	17,200	39,048	0.69	
270	Washington St.	Calle Tampico	Ave. 52	MAJOR	6D	57,000	17,200	38,480	0.68	
271	Eisenhower Dr.	Washington St.	Ave. 50	SECONDARY	4U	28,000	13,000	14,300	0.51	
272	Eisenhower Dr.	Ave. 50	Calle Tampico	SECONDARY	4U	28,000	14,000	15,400	0.55	
273	Eisenhower Dr.	Calle Tampico	Avenida Bermudas	SECONDARY	4U	28,000	14,000	15,400	0.55	
274	Not Used									
275	Avenida Bermudas	Ave. 52	Eisenhower Dr.	SECONDARY	4U	28,000	11,100	12,210	0.44	
276	Adams St.	Ave. 44	Miles Ave.	SECONDARY	4U	28,000	N/A	4,626	0.17	
277	Adams St.	Miles Ave.	Westward Ho Dr.	SECONDARY	4U	28,000	N/A	10,508	0.38	
278	Adams St.	Westward Ho Dr.	Hwy. 111	SECONDARY	4U	28,000	N/A	10,863	0.39	
279	Adams St.	Hwy. 111	Ave. 48	SECONDARY	4U	28,000	N/A	28,953	1.03	OVER CAPACITY
280	Dunes Palms Rd.	Ave. 44	Miles Ave.	SECONDARY	4U	28,000	N/A	2,107	0.08	
281	Dunes Palms Rd.	Miles Ave.	Westward Ho Dr.	SECONDARY	4U	28,000	N/A	4,193	0.15	
282	Dunes Palms Rd.	Westward Ho Dr.	Hwy. 111	SECONDARY	4U	28,000	1,400	9,786	0.35	
283	Dunes Palms Rd.	Hwy. 111	Ave. 48	SECONDARY	4U	28,000	900	13,599	0.49	
284	Jefferson St.	40th Ave.	I-10	MAJOR	6D	57,000	1,761	16,850	0.30	
285	Jefferson St.	I-10	Indio Ave.	MAJOR	6D	57,000	6,626	40,557	0.71	
286	Jefferson St.	Indio Ave.	Country Club Dr.	MAJOR	6D	57,000	11,300	43,320	0.76	
287	Jefferson St.	Country Club Dr.	Ave. 44	MAJOR	6D	57,000	13,000	37,650	0.66	
288	Jefferson St.	Ave. 44	Miles Ave.	MAJOR	6D	57,000	13,600	37,725	0.66	
289	Jefferson St.	Miles Ave.	Westward Ho Dr.	MAJOR	6D	57,000	10,800	33,418	0.59	
290	Jefferson St.	Westward Ho Dr.	Hwy. 111	MAJOR	6D	57,000	10,800	33,588	0.59	
291	Jefferson St.	Hwy. 111	Ave. 48	MAJOR	6D	57,000	13,786	36,845	0.65	
292	Jefferson St.	Ave. 48	Ave. 50	MAJOR	6D	57,000	11,700	47,324	0.83	NEAR CAPACITY

APPENDIX C-1

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN RECOMMENDED ALTERNATIVE FUTURE DAILY FORECAST

Seg. ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
359	Tyler St.	Vista Del Sur	Ave. 50	SECONDARY	4U	28,000	N/A	16,247	0.58	
360	Tyler St.	Ave. 50	Ave. 52	COLLECTOR	2U	14,000	N/A	8,940	0.64	
361	Dillon Rd.	I-10	Vista Del Sur	PRIMARY	4D	38,000	N/A	36,917	0.97	NEAR CAPACITY
362	Tyler St.	Grapefruit Blvd.	Ave. 54	PRIMARY	4D	38,000	1,100	12,471	0.33	
363	Tyler St.	Ave. 54	Airport Blvd.	PRIMARY	4D	38,000	N/A	8,841	0.23	
364	Tyler St.	Ave. 60	Ave. 62	COLLECTOR	2U	14,000	N/A	5,400	0.39	
365	Tyler St.	Ave. 62	Ave. 64	COLLECTOR	2U	14,000	N/A	6,831	0.49	
366	Tyler St.	Ave. 64	Ave. 66	COLLECTOR	2U	14,000	N/A	2,000	0.14	
367	Polk St.	Airport Blvd.	Ave. 58	SECONDARY	4U	28,000	1,600	16,736	0.60	
368	Polk St.	Ave. 58	Ave. 60	SECONDARY	4U	28,000	N/A	14,904	0.53	
369	Polk St.	Ave. 60	Ave. 62	SECONDARY	4U	28,000	N/A	11,506	0.41	
370	Polk St.	Ave. 62	Ave. 64	SECONDARY	4U	28,000	N/A	5,762	0.21	
371	Polk St.	Ave. 64	Ave. 66	SECONDARY	4U	28,000	N/A	3,648	0.13	
372	Avenue 50	SR-86 (S)	Vista Del Sur	MAJOR	6D	57,000	N/A	59,737	1.05	OVER CAPACITY
373	Filmore St.	Ave. 58	Ave. 60	COLLECTOR	2U	14,000	N/A	2,000	0.14	
374	Filmore St.	Ave. 60	Ave. 62	COLLECTOR	2U	14,000	N/A	2,000	0.14	
375	Filmore St.	Ave. 62	Ave. 64	COLLECTOR	2U	14,000	N/A	2,000	0.14	
376	Filmore St.	Ave. 64	Ave. 66	COLLECTOR	2U	14,000	N/A	2,000	0.14	
377	Filmore St.	Ave. 50	Ave. 52	SECONDARY	4U	28,000	N/A	17,615	0.63	
378	Filmore St.	Ave. 52	Ave. 54	SECONDARY	4U	28,000	N/A	11,409	0.41	
379	Filmore St.	Ave. 54	Airport Blvd.	SECONDARY	4U	28,000	N/A	13,801	0.49	
380	Ave. 50	N. of I-10		PRIMARY	4D	38,000	N/A	9,237	0.24	
381	Ave. 50	E. of Filmore	Filmore St.	MAJOR	6D	57,000	N/A	45,690	0.80	
382	Pierce St.	Ave. 52	Ave. 54	SECONDARY	4U	28,000	200	2,000	0.07	
383	Pierce St.	Ave. 54	Airport Blvd.	SECONDARY	4U	28,000	N/A	2,000	0.07	
384	Pierce St.	Airport Blvd.	Ave. 60	COLLECTOR	2U	14,000	N/A	2,000	0.14	
385	Pierce St.	Grapefruit Blvd.	Ave. 62	SECONDARY	4U	28,000	2,400	2,640	0.09	
386	Pierce St.	Ave. 62	Ave. 64	SECONDARY	4U	28,000	N/A	2,000	0.07	
387	Pierce St.	Ave. 64	Ave. 66	SECONDARY	4U	28,000	N/A	2,000	0.07	
388	Pierce St.	S. of Ave. 66		SECONDARY	4U	28,000	N/A	3,030	0.11	
389	Country Club Dr.	Oasis Club Dr.	Washington St.	PRIMARY	4D	38,000	17,741	39,238	1.03	OVER CAPACITY
390	Country Club Dr.	Washington St.	42nd Ave.	PRIMARY	4D	38,000	7,000	12,193	0.32	
391	Country Club Dr.	42nd Ave.	Jefferson St.	PRIMARY	4D	38,000	12,200	32,979	0.87	NEAR CAPACITY

APPENDIX C-1

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN RECOMMENDED ALTERNATIVE FUTURE DAILY FORECAST

Seg. ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
326	Jackson St.	Ave. 52	Ave. 54	PRIMARY	4D	38,000	N/A	24,959	0.66	
327	Jackson St.	Ave. 54	Airport Blvd.	PRIMARY	4D	38,000	1,700	21,582	0.57	
328	Jackson St.	Airport Blvd.	Ave. 58	PRIMARY	4D	38,000	N/A	21,394	0.56	
329	Jackson St.	Ave. 58	Ave. 60	PRIMARY	4D	38,000	1,500	20,524	0.54	
330	Jackson St.	Ave. 60	Ave. 62	SECONDARY	4U	28,000	1,400	12,840	0.46	
331	Jackson St.	Ave. 62	Ave. 64	SECONDARY	4U	28,000	N/A	2,000	0.07	
332	Jackson St.	Ave. 64	Ave. 66	SECONDARY	4U	28,000	N/A	2,000	0.07	
333	Auto Center Dr.	Ave. 44	I-10	SECONDARY	4U	28,000	6,000	9,044	0.32	
334	Auto Center Dr.	I-10	Indio Ave.	PRIMARY	4D	38,000	6,100	41,011	1.08	OVER CAPACITY
335	Van Buren St.	Ave. 48	Ave. 50	PRIMARY	4D	38,000	3,000	34,561	0.91	NEAR CAPACITY
336	Van Buren St.	Ave. 50	Ave. 52	PRIMARY	4D	38,000	2,262	31,702	0.83	NEAR CAPACITY
337	Van Buren St.	Ave. 52	Ave. 54	PRIMARY	4D	38,000	1,100	29,143	0.77	
338	Van Buren St.	Ave. 54	Airport Blvd.	PRIMARY	4D	38,000	1,400	28,366	0.75	
339	Van Buren St.	Airport Blvd.	Ave. 58	PRIMARY	4D	38,000	1,300	28,783	0.76	
340	Van Buren St.	Ave. 58	Ave. 60	PRIMARY	4D	38,000	N/A	26,700	0.70	
341	Van Buren St.	Ave. 60	Ave. 62	SECONDARY	4U	28,000	N/A	20,569	0.73	
342	Van Buren St.	Ave. 62	Ave. 64	SECONDARY	4U	28,000	N/A	7,891	0.28	
343	Van Buren St.	Ave. 64	Ave. 66	SECONDARY	4U	28,000	N/A	5,698	0.20	
344	Van Buren St.	S. of Ave. 66		COLLECTOR	2U	14,000	N/A	2,000	0.14	
345	Harrison St.	Hwy. 111	Ave. 50	PRIMARY	4D	38,000	26,000	34,245	0.90	NEAR CAPACITY
346	Harrison St.	Ave. 50	Ave. 52	MAJOR	6D	57,000	25,500	43,465	0.76	
347	Harrison St.	Ave. 52	Ave. 54	MAJOR	6D	57,000	15,200	51,764	0.91	NEAR CAPACITY
348	Harrison St.	Ave. 54	Airport Blvd.	MAJOR	6D	57,000	12,000	52,017	0.91	NEAR CAPACITY
349	Harrison St.	Airport Blvd.	Ave. 58	MAJOR	6D	57,000	9,100	54,338	0.95	NEAR CAPACITY
350	Harrison St.	Ave. 58	Ave. 60	MAJOR	6D	57,000	9,100	51,502	0.90	NEAR CAPACITY
351	Harrison St.	Ave. 60	Ave. 62	MAJOR	6D	57,000	11,000	41,616	0.73	
352	Harrison St.	Ave. 62	Ave. 64	MAJOR	6D	57,000	11,000	41,521	0.73	
353	Harrison St.	Ave. 64	Ave. 66	PRIMARY	4D	38,000	11,000	35,936	0.95	NEAR CAPACITY
354	Harrison St.	S. of Ave. 66		PRIMARY	4D	38,000	10,400	23,726	0.62	
355	Dillon Rd.	N. of Vista Del Sur		PRIMARY	4D	38,000	3,191	28,863	0.76	
356	Dillon Rd.	Vista Del Sur	Hwy. 86 (S)	PRIMARY	4D	38,000	7,593	35,204	0.93	NEAR CAPACITY
357	Dillon Rd.	Hwy. 86 (S)	Hwy. 111	PRIMARY	4D	38,000	11,602	38,293	1.01	OVER CAPACITY
358	Vista Del Sur	E. of Dillon		SECONDARY	4U	28,000	N/A	11,584	0.41	

APPENDIX C-1

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN RECOMMENDED ALTERNATIVE FUTURE DAILY FORECAST

Seg. ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
425	Ave. 48	Monroe St.	Jackson St.	PRIMARY	4D	38,000	6,500	25,694	0.68	
426	Ave. 48	Jackson St.	Van Buren St.	PRIMARY	4D	38,000	5,400	23,075	0.61	
427	Ave. 48	Van Buren St.	Hwy. 111	PRIMARY	4D	38,000	3,800	35,140	0.92	NEAR CAPACITY
428	Ave. 50	Eisenhower Dr.	Washington St.	PRIMARY	4D	38,000	3,900	29,360	0.77	
429	Ave. 50	Washington St.	Jefferson St.	PRIMARY	4D	38,000	7,837	27,198	0.72	
430	Ave. 50	Jefferson St.	Madison St.	PRIMARY	4D	38,000	5,885	22,698	0.60	
431	Ave. 50	Madison St.	Monroe St.	PRIMARY	4D	38,000	3,300	24,844	0.65	
432	Ave. 50	Monroe St.	Jackson St.	PRIMARY	4D	38,000	9,400	25,349	0.67	
433	Ave. 50	Jackson St.	Van Buren St.	PRIMARY	4D	38,000	5,412	25,227	0.66	
434	Ave. 50	Van Buren St.	Harrison St.	PRIMARY	4D	38,000	9,800	27,897	0.73	
435	Ave. 50	Grapefruit Blvd.	Tyler St.	MAJOR	6D	57,000	4,600	35,238	0.62	
436	Ave. 50	Tyler St.	HWY 86 (S)	MAJOR	6D	57,000	4,600	40,686	0.71	
437	Ave. 50	HWY 86 (S)	Filmore St.	MAJOR	6D	57,000	N/A	56,440	0.99	NEAR CAPACITY
438	Calle Tampico	W. of Washington St.		COLLECTOR	2U	14,000	N/A	6,212	0.44	
439	Ave. 52	Washington St.	Jefferson St.	PRIMARY	4D	38,000	8,545	32,942	0.87	NEAR CAPACITY
440	Ave. 52	Jefferson St.	Madison St.	PRIMARY	4D	38,000	4,847	26,941	0.71	
441	Ave. 52	Madison St.	Monroe St.	PRIMARY	4D	38,000	3,700	25,560	0.67	
442	Ave. 52	Monroe St.	Jackson St.	PRIMARY	4D	38,000	3,700	29,344	0.77	
443	Ave. 52	Jackson St.	Van Buren St.	PRIMARY	4D	38,000	5,500	21,837	0.57	
444	Ave. 52	Van Buren St.	Harrison St.	PRIMARY	4D	38,000	6,255	18,696	0.49	
445	Ave. 52	Harrison St.	Hwy. 111	PRIMARY	4D	38,000	9,943	20,995	0.55	
446	Ave. 52	Hwy. 111	Tyler St.	MAJOR	6D	57,000	8,600	29,687	0.52	
447	Ave. 52	Tyler St.	HWY 86 (S)	MAJOR	6D	57,000	N/A	21,887	0.38	
448	Ave. 52	HWY 86 (S)	Filmore St.	PRIMARY	4D	38,000	600	19,259	0.51	
449	Ave. 52	Filmore St.	Pierce St.	PRIMARY	4D	38,000	600	2,000	0.05	
450	Ave. 54	Jefferson St.	Madison St.	PRIMARY	4D	38,000	2,800	21,750	0.57	
451	Ave. 54	Madison St.	Monroe St.	SECONDARY	4U	28,000	600	4,011	0.14	
452	Ave. 54	Monroe St.	Jackson St.	SECONDARY	4U	28,000	800	2,318	0.08	
453	Ave. 54	Jackson St.	Van Buren St.	SECONDARY	4U	28,000	1,077	2,666	0.10	
454	Ave. 54	Van Buren St.	Harrison St.	SECONDARY	4U	28,000	1,353	6,972	0.25	
455	Ave. 54	Harrison St.	Tyler St.	SECONDARY	4U	28,000	1,800	10,785	0.39	
456	Ave. 54	Tyler St.	Hwy. 111	SECONDARY	4U	28,000	855	9,053	0.32	
457	Ave. 54	Hwy. 111	HWY 86 (S)	SECONDARY	4U	28,000	619	12,071	0.43	

APPENDIX C-1

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN RECOMMENDED ALTERNATIVE FUTURE DAILY FORECAST

Seg. ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
392	Hovley Ln.	Oasis Club Dr.	Washington St.	PRIMARY	4D	38,000	N/A	31,195	0.82	NEAR CAPACITY
393	42nd Ave.	Washington St.	Country Club Dr.	PRIMARY	4D	38,000	9,300	20,765	0.55	
394	Fred Waring Dr.	Oasis Club Dr.	Washington St.	MAJOR	6D	57,000	20,876	58,172	1.02	OVER CAPACITY
395	Fred Waring Dr.	Washington St.	Adams St.	PRIMARY	4D	38,000	17,500	32,566	0.86	NEAR CAPACITY
396	Fred Waring Dr.	Adams St.	Dune Palms Rd.	PRIMARY	4D	38,000	14,350	32,914	0.87	NEAR CAPACITY
397	Fred Waring Dr.	Dune Palms Rd.	Jefferson St.	PRIMARY	4D	38,000	11,200	31,198	0.82	NEAR CAPACITY
398	Fred Waring Dr.	Jefferson St.	Madison St.	PRIMARY	4D	38,000	12,522	27,266	0.72	
399	Fred Waring Dr.	Madison St.	Monroe St.	PRIMARY	4D	38,000	7,900	19,275	0.51	
400	Avenue 50	E. of Filmore	I-10	MAJOR	6D	57,000	N/A	22,888	0.40	
401	Miles Ave.	Hwy. 111	Washington St.	PRIMARY	4D	38,000	3,800	11,012	0.29	
402	Miles Ave.	Washington St.	Adams St.	PRIMARY	4D	38,000	6,600	18,633	0.49	
403	Miles Ave.	Adams St.	Dune Palms Rd.	PRIMARY	4D	38,000	6,700	13,603	0.36	
404	Miles Ave.	Dune Palms Rd.	Jefferson St.	PRIMARY	4D	38,000	6,800	17,200	0.45	
405	Miles Ave.	Jefferson St.	Madison St.	SECONDARY	4U	28,000	11,500	14,911	0.53	
406	Miles Ave.	Madison St.	Monroe St.	SECONDARY	4U	28,000	10,500	16,603	0.59	
407	Miles Ave.	Monroe St.	Jackson St.	SECONDARY	4U	28,000	4,457	4,903	0.18	
408	Westward Ho Dr.	Adams St.	Dune Palms Rd.	COLLECTOR	2U	14,000	N/A	3,200	0.23	
409	Westward Ho Dr.	Dune Palms Rd.	Jefferson St.	COLLECTOR	2U	14,000	N/A	2,380	0.17	
410	Westward Ho Dr.	E. of Jefferson St.		COLLECTOR	2U	14,000	N/A	2,000	0.14	
411	Hwy. 111	El Dorado Dr.	Miles Ave.	AUG. MAJOR	8D	76,000	29,000	71,325	0.94	NEAR CAPACITY
412	Hwy. 111	Miles Ave.	Washington St.	AUG. MAJOR	8D	76,000	31,076	62,214	0.82	NEAR CAPACITY
413	Hwy. 111	Washington St.	Adams St.	MAJOR	6D	57,000	23,300	61,288	1.08	OVER CAPACITY
414	Hwy. 111	Adams St.	Dune Palms Rd.	MAJOR	6D	57,000	19,800	40,684	0.71	
415	Hwy. 111	Dune Palms Rd.	Jefferson St.	MAJOR	6D	57,000	19,800	48,510	0.85	NEAR CAPACITY
416	Hwy. 111	Jefferson St.	Madison St.	MAJOR	6D	57,000	20,700	57,390	1.01	OVER CAPACITY
417	Hwy. 111	Madison St.	Monroe St.	MAJOR	6D	57,000	28,000	38,974	0.68	
418	Hwy. 111	Monroe St.	Jackson St.	MAJOR	6D	57,000	25,000	47,132	0.83	NEAR CAPACITY
419	Hwy. 111	Jackson St.	Auto Center Dr.	MAJOR	6D	57,000	13,800	52,190	0.92	NEAR CAPACITY
420	Ave. 48	Washington St.	Adams St.	PRIMARY	4D	38,000	6,300	11,972	0.32	
421	Ave. 48	Adams St.	Dune Palms Rd.	PRIMARY	4D	38,000	6,300	26,262	0.69	
422	Ave. 48	Dune Palms Rd.	Jefferson St.	PRIMARY	4D	38,000	6,300	35,778	0.94	NEAR CAPACITY
423	Ave. 48	Jefferson St.	Madison St.	PRIMARY	4D	38,000	7,600	24,954	0.66	
424	Ave. 48	Madison St.	Monroe St.	PRIMARY	4D	38,000	7,050	28,637	0.75	

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN RECOMMENDED ALTERNATIVE FUTURE DAILY FORECAST

Seg. ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
491	Ave. 62	Filmore St.	Pierce St.	PRIMARY	4D	38,000	N/A	8,551	0.23	
492	Ave. 62	Pierce St.	Grapefruit Blvd.	PRIMARY	4D	38,000	N/A	8,200	0.22	
493	Ave. 62	Grapefruit Blvd.	HWY 86 (S)	PRIMARY	4D	38,000	N/A	11,681	0.31	
494	Ave. 62	E. OF HWY 86 (S)		SECONDARY	4U	28,000	N/A	2,000	0.07	
495	Not Used									
496	Ave. 64	Jackson St.	Van Buren St.	COLLECTOR	2U	14,000	N/A	2,000	0.14	
497	Ave. 64	Van Buren St.	Harrison St.	COLLECTOR	2U	14,000	N/A	5,861	0.42	
498	Ave. 64	Harrison St.	Tyler St.	COLLECTOR	2U	14,000	N/A	3,483	0.25	
499	Ave. 64	Tyler St.	Polk St.	COLLECTOR	2U	14,000	N/A	2,030	0.15	
500	Ave. 64	Polk St.	Filmore St.	COLLECTOR	2U	14,000	N/A	2,000	0.14	
501	Ave. 64	Filmore St.	Pierce St.	COLLECTOR	2U	14,000	N/A	2,000	0.14	
502	Ave. 64	Pierce St.	HWY 86 (S)	COLLECTOR	2U	14,000	N/A	2,000	0.14	
503	Ave. 66	Jackson St.	Van Buren St.	SECONDARY	4U	28,000	N/A	2,000	0.07	
504	Ave. 66	Van Buren St.	Harrison St.	SECONDARY	4U	28,000	N/A	2,000	0.07	
505	Ave. 66	Harrison St.	Tyler St.	PRIMARY	4D	38,000	N/A	5,599	0.15	
506	Ave. 66	Tyler St.	Polk St.	PRIMARY	4D	38,000	N/A	5,730	0.15	
507	Ave. 66	Polk St.	Filmore St.	PRIMARY	4D	38,000	N/A	3,559	0.09	
508	Ave. 66	Filmore St.	Pierce St. (W)	PRIMARY	4D	38,000	N/A	4,468	0.12	
509	Ave. 66	Pierce St. (W)	Pierce St. (E)	PRIMARY	4D	38,000	N/A	4,043	0.11	
510	Ave. 66	Pierce St. (E)	HWY 86 (S)	PRIMARY	4D	38,000	N/A	5,075	0.13	
511	Ave. 66	E. OF HWY 86 (S)		COLLECTOR	2U	14,000	N/A	2,430	0.17	
512	I-10	Cook St.	Washington St.	FREEWAY	8D	160,000	47,000	187,882	1.17	OVER CAPACITY
513	I-10	Washington St.	Jefferson St.	FREEWAY	8D	160,000	40,000	160,736	1.00	NEAR CAPACITY
514	Not Used									
515	I-10	Jefferson St.	Monroe St.	FREEWAY	8D	160,000	31,500	136,806	0.86	NEAR CAPACITY
516	I-10	Monroe St.	Jackson St.	FREEWAY	8D	160,000	29,000	121,218	0.76	
517	I-10	Jackson St.	Auto Center Dr.	FREEWAY	8D	160,000	28,000	114,453	0.72	
518	I-10	Auto Center Dr.	Hwy. 86	FREEWAY	8D	160,000	25,500	145,861	0.91	NEAR CAPACITY
519	I-10	Hwy. 86	Dillon Rd.	FREEWAY	8D	160,000	16,600	59,078	0.37	
520	I-10	Dillon Rd.	Ave. 50	FREEWAY	8D	160,000	17,200	40,066	0.25	
521	I-10	E. of Ave. 50		FREEWAY	8D	160,000	17,200	28,099	0.18	
522	Hwy. 86	I-10	Dillon Rd.	FREEWAY	8D	160,000	9,600	86,780	0.54	
523	Hwy. 86	Dillon Rd.	Ave. 50	FREEWAY	8D	160,000	6,000	81,413	0.51	

APPENDIX C-1

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN RECOMMENDED ALTERNATIVE FUTURE DAILY FORECAST

Seg. ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
458	Ave. 54	HWY 86 (S)	Filmore St.	SECONDARY	4U	28,000	100	7,905	0.28	
459	Ave. 54	Filmore St.	Pierce St.	COLLECTOR	2U	14,000	400	2,000	0.14	
460	Airport Blvd.	Madison St.	Monroe St.	PRIMARY	4D	38,000	800	19,304	0.51	
461	Airport Blvd.	Monroe St.	Jackson St.	PRIMARY	4D	38,000	2,300	22,282	0.59	
462	Airport Blvd.	Jackson St.	Van Buren St.	PRIMARY	4D	38,000	2,817	29,170	0.77	
463	Airport Blvd.	Van Buren St.	Harrison St.	PRIMARY	4D	38,000	3,333	23,485	0.62	
464	Airport Blvd.	Harrison St.	Tyler St.	PRIMARY	4D	38,000	3,826	17,886	0.47	
465	Airport Blvd.	Tyler St.	Polk St.	PRIMARY	4D	38,000	3,963	20,507	0.54	
466	Airport Blvd.	Polk St.	Hwy. 111	MAJOR	6D	57,000	4,100	33,765	0.59	
467	Airport Blvd.	Hwy. 111	HWY 86 (S)	MAJOR	6D	57,000	N/A	37,207	0.65	
468	Airport Blvd.	HWY 86 (S)	Filmore St.	PRIMARY	4D	38,000	N/A	16,007	0.42	
469	Airport Blvd.	Filmore St.	Pierce St.	PRIMARY	4D	38,000	N/A	2,016	0.05	
470	Ave. 58	Madison St.	Monroe St.	SECONDARY	4U	28,000	800	7,788	0.28	
471	Ave. 58	Monroe St.	Jackson St.	SECONDARY	4U	28,000	1,100	9,012	0.32	
472	Ave. 58	Jackson St.	Van Buren St.	SECONDARY	4U	28,000	N/A	8,828	0.32	
473	Ave. 58	Van Buren St.	Harrison St.	SECONDARY	4U	28,000	N/A	9,367	0.33	
474	Ave. 58	Polk St.	Filmore St.	COLLECTOR	2U	14,000	N/A	2,000	0.14	
475	Ave. 60	Madison St.	Monroe St.	SECONDARY	4U	28,000	200	11,674	0.42	
476	Ave. 60	Monroe St.	Jackson St.	PRIMARY	4D	38,000	300	9,110	0.24	
477	Ave. 60	Jackson St.	Van Buren St.	PRIMARY	4D	38,000	N/A	9,881	0.26	
478	Ave. 60	Van Buren St.	Harrison St.	PRIMARY	4D	38,000	N/A	16,309	0.43	
479	Ave. 60	Harrison St.	Tyler St.	PRIMARY	4D	38,000	N/A	33,857	0.89	NEAR CAPACITY
480	Ave. 60	Tyler St.	Ave. 62	PRIMARY	4D	38,000	N/A	17,003	0.45	
481	Ave. 60	Polk St.	Filmore St.	COLLECTOR	2U	14,000	N/A	2,000	0.14	
482	Ave. 60	Filmore St.	Grapefruit Blvd.	COLLECTOR	2U	14,000	N/A	2,414	0.17	
483	Ave. 60	E. of Pierce St.		COLLECTOR	2U	14,000	N/A	2,000	0.14	
484	Ave. 62	Madison St.	Monroe St.	SECONDARY	4U	28,000	N/A	19,106	0.68	
485	Ave. 62	Monroe St.	Jackson St.	SECONDARY	4U	28,000	1,100	15,813	0.56	
486	Ave. 62	Jackson St.	Van Buren St.	SECONDARY	4U	28,000	N/A	14,416	0.51	
487	Ave. 62	Van Buren St.	Harrison St.	SECONDARY	4U	28,000	N/A	17,411	0.62	
488	Ave. 62	Harrison St.	Tyler St.	SECONDARY	4U	28,000	N/A	8,247	0.29	
489	Ave. 62	Tyler St.	Ave. 60	SECONDARY	4U	28,000	N/A	7,500	0.27	
490	Ave. 62	Polk St.	Filmore St.	PRIMARY	4D	38,000	N/A	9,755	0.26	

APPENDIX C-2

LA QUINTA TRAFFIC MODEL POST 2020 EXISTING GENERAL PLAN FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
260	Washington St.	N. of Varner Rd.		MAJOR	6D	57,000	7,109	31,788	0.56	
261	Washington St.	I-10 Fwy.	Country Club Dr.	AUG. MAJOR	8D	76,000	24,000	75,756	1.00	NEAR CAPACITY
262	Washington St.	Country Club Dr.	42nd St.	MAJOR	6D	57,000	24,000	52,152	0.91	NEAR CAPACITY
263	Washington St.	42nd St.	Ave. 44	MAJOR	6D	57,000	27,000	54,632	0.96	NEAR CAPACITY
264	Washington St.	Ave. 44	Miles Ave.	MAJOR	6D	57,000	25,250	65,535	1.15	OVER CAPACITY
265	Washington St.	Miles Ave.	Hwy. 111	MAJOR	6D	57,000	23,500	62,512	1.10	OVER CAPACITY
266	Washington St.	Hwy. 111	Ave. 48	AUG. MAJOR	8D	76,000	29,500	63,317	0.83	NEAR CAPACITY
267	Washington St.	Ave. 48	Eisenhower Dr.	AUG. MAJOR	8D	76,000	25,600	56,192	0.74	
268	Washington St.	Eisenhower Dr.	Ave. 50	MAJOR	6D	57,000	21,700	52,984	0.93	NEAR CAPACITY
269	Washington St.	Ave. 50	Calle Tampico	MAJOR	6D	57,000	17,200	38,075	0.67	
270	Washington St.	Calle Tampico	Ave. 52	MAJOR	6D	57,000	17,200	36,534	0.64	
271	Eisenhower Dr.	Washington St.	Ave. 50	SECONDARY	4U	28,000	13,000	14,300	0.51	
272	Eisenhower Dr.	Ave. 50	Calle Tampico	SECONDARY	4U	28,000	14,000	15,400	0.55	
273	Eisenhower Dr.	Calle Tampico	Avenida Bermudas	SECONDARY	4U	28,000	14,000	15,400	0.55	
274	Not Used									
275	Avenida Bermudas	Ave. 52	Eisenhower Dr.	SECONDARY	4U	28,000	11,100	12,210	0.44	
276	Adams St.	Ave. 44	Miles Ave.	SECONDARY	4U	28,000	N/A	5,162	0.18	
277	Adams St.	Miles Ave.	Westward Ho Dr.	SECONDARY	4U	28,000	N/A	10,915	0.39	
278	Adams St.	Westward Ho Dr.	Hwy. 111	SECONDARY	4U	28,000	N/A	11,545	0.41	
279	Adams St.	Hwy. 111	Ave. 48	SECONDARY	4U	28,000	N/A	28,752	1.03	OVER CAPACITY
280	Dunes Palms Rd.	Ave. 44	Miles Ave.	SECONDARY	4U	28,000	N/A	2,278	0.08	
281	Dunes Palms Rd.	Miles Ave.	Westward Ho Dr.	SECONDARY	4U	28,000	N/A	4,301	0.15	
282	Dunes Palms Rd.	Westward Ho Dr.	Hwy. 111	SECONDARY	4U	28,000	1,400	9,395	0.34	
283	Dunes Palms Rd.	Hwy. 111	Ave. 48	SECONDARY	4U	28,000	900	12,593	0.45	
284	Jefferson St.	40th Ave.	I-10	MAJOR	6D	57,000	1,761	16,811	0.29	
285	Jefferson St.	I-10	Indio Ave.	MAJOR	6D	57,000	6,626	40,173	0.70	
286	Jefferson St.	Indio Ave.	Country Club Dr.	MAJOR	6D	57,000	11,300	42,341	0.74	
287	Jefferson St.	Country Club Dr.	Ave. 44	MAJOR	6D	57,000	13,000	36,643	0.64	
288	Jefferson St.	Ave. 44	Miles Ave.	MAJOR	6D	57,000	13,600	35,333	0.62	
289	Jefferson St.	Miles Ave.	Westward Ho Dr.	MAJOR	6D	57,000	10,800	31,181	0.55	
290	Jefferson St.	Westward Ho Dr.	Hwy. 111	MAJOR	6D	57,000	10,800	31,152	0.55	
291	Jefferson St.	Hwy. 111	Ave. 48	MAJOR	6D	57,000	13,786	31,697	0.56	
292	Jefferson St.	Ave. 48	Ave. 50	MAJOR	6D	57,000	11,700	41,220	0.72	

APPENDIX C-1

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN RECOMMENDED ALTERNATIVE FUTURE DAILY FORECAST

Seg. ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
524	Hwy. 86	Ave. 50	Ave. 52	FREEWAY	8D	160,000	6,000	58,963	0.37	
525	Not Used									
526	Hwy. 86	Ave. 52	Airport Blvd.	FREEWAY	8D	160,000	6,000	31,320	0.20	
527	Hwy. 86	Airport Blvd.	Ave. 62	FREEWAY	8D	160,000	5,800	31,320	0.20	
528	Hwy. 86	Ave. 62	Ave. 66	FREEWAY	8D	160,000	11,000	24,310	0.15	
529	Hwy. 86	S. of Ave. 66		FREEWAY	8D	160,000	10,400	17,644	0.11	
530	Indio Ave.	Madison St.	Monroe St.	PRIMARY	4D	38,000	N/A	25,813	0.68	
531	Indio Ave.	Monroe St.	Jackson St.	PRIMARY	4D	38,000	N/A	33,465	0.88	NEAR CAPACITY
532	Indio Ave.	Jackson St.	Auto Center Dr.	PRIMARY	4D	38,000	N/A	33,436	0.88	NEAR CAPACITY
533	Hwy. 86/111	Auto Center Dr.	Dillon Rd.	PRIMARY	4D	38,000	26,000	44,330	1.17	OVER CAPACITY
534	Hwy. 111	Dillon Rd.	Ave. 50	MAJOR	6D	57,000	34,500	55,434	0.97	NEAR CAPACITY
535	Hwy. 111	Ave. 50	Ave. 52	PRIMARY	4D	38,000	10,900	25,139	0.66	
536	Hwy. 111	Ave. 52	Tyler St.	PRIMARY	4D	38,000	9,000	38,951	1.03	OVER CAPACITY
537	Hwy. 111	Tyler St.	Ave. 54	PRIMARY	4D	38,000	9,000	23,633	0.62	
538	Hwy. 111	Ave. 54	Airport Blvd.	PRIMARY	4D	38,000	9,000	25,840	0.68	
539	Hwy. 111	Airport Blvd.	Filmore St.	PRIMARY	4D	38,000	8,500	41,136	1.08	OVER CAPACITY
540	Grapefruit Blvd.	Filmore St.	Ave. 60	PRIMARY	4D	38,000	6,300	26,159	0.69	
541	Grapefruit Blvd.	Ave. 60	Pierce	PRIMARY	4D	38,000	6,300	18,849	0.50	
542	Grapefruit Blvd.	Pierce	Ave. 62	PRIMARY	4D	38,000	6,300	16,408	0.43	
543	Grapefruit Blvd.	Ave. 62	Ave. 64	PRIMARY	4D	38,000	6,300	21,404	0.56	
544	Grapefruit Blvd.	S. of Ave. 64		PRIMARY	4D	38,000	5,900	21,289	0.56	
545	Ave. 58	W. of Madison St.		SECONDARY	4U	28,000	N/A	14,659	0.52	

LA QUINTA TRAFFIC MODEL POST 2020 EXISTING GENERAL PLAN FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
326	Jackson St.	Ave. 52	Ave. 54	PRIMARY	4D	38,000	N/A	12,088	0.32	
327	Jackson St.	Ave. 54	Airport Blvd.	PRIMARY	4D	38,000	1,700	10,343	0.27	
328	Jackson St.	Airport Blvd.	Ave. 58	PRIMARY	4D	38,000	N/A	8,426	0.22	
329	Jackson St.	Ave. 58	Ave. 60	PRIMARY	4D	38,000	1,500	8,284	0.22	
330	Jackson St.	Ave. 60	Ave. 62	SECONDARY	4U	28,000	1,400	6,013	0.21	
331	Jackson St.	Ave. 62	Ave. 64	SECONDARY	4U	28,000	N/A	2,000	0.07	
332	Jackson St.	Ave. 64	Ave. 66	SECONDARY	4U	28,000	N/A	2,000	0.07	
333	Auto Center Dr.	Ave. 44	I-10	SECONDARY	4U	28,000	6,000	8,354	0.30	
334	Auto Center Dr.	I-10	Indio Ave.	PRIMARY	4D	38,000	6,100	40,695	1.07	OVER CAPACITY
335	Van Buren St.	Ave. 48	Ave. 50	PRIMARY	4D	38,000	3,000	27,296	0.72	
336	Van Buren St.	Ave. 50	Ave. 52	PRIMARY	4D	38,000	2,262	21,297	0.56	
337	Van Buren St.	Ave. 52	Ave. 54	PRIMARY	4D	38,000	1,100	19,241	0.51	
338	Van Buren St.	Ave. 54	Airport Blvd.	PRIMARY	4D	38,000	1,400	15,893	0.42	
339	Van Buren St.	Airport Blvd.	Ave. 58	PRIMARY	4D	38,000	1,300	11,444	0.30	
340	Van Buren St.	Ave. 58	Ave. 60	PRIMARY	4D	38,000	N/A	12,024	0.32	
341	Van Buren St.	Ave. 60	Ave. 62	SECONDARY	4U	28,000	N/A	5,869	0.21	
342	Van Buren St.	Ave. 62	Ave. 64	SECONDARY	4U	28,000	N/A	2,796	0.10	
343	Van Buren St.	Ave. 64	Ave. 66	SECONDARY	4U	28,000	N/A	2,000	0.07	
344	Van Buren St.	S. of Ave. 66		COLLECTOR	2U	14,000	N/A	2,000	0.14	
345	Harrison St.	Hwy. 111	Ave. 50	PRIMARY	4D	38,000	26,000	29,530	0.78	
346	Harrison St.	Ave. 50	Ave. 52	MAJOR	6D	57,000	25,500	38,414	0.67	
347	Harrison St.	Ave. 52	Ave. 54	MAJOR	6D	57,000	15,200	43,709	0.77	
348	Harrison St.	Ave. 54	Airport Blvd.	MAJOR	6D	57,000	12,000	43,337	0.76	
349	Harrison St.	Airport Blvd.	Ave. 58	MAJOR	6D	57,000	9,100	46,030	0.81	NEAR CAPACITY
350	Harrison St.	Ave. 58	Ave. 60	MAJOR	6D	57,000	9,100	40,502	0.71	
351	Harrison St.	Ave. 60	Ave. 62	MAJOR	6D	57,000	11,000	33,767	0.59	
352	Harrison St.	Ave. 62	Ave. 64	MAJOR	6D	57,000	11,000	33,101	0.58	
353	Harrison St.	Ave. 64	Ave. 66	PRIMARY	4D	38,000	11,000	30,457	0.80	
354	Harrison St.	S. of Ave. 66		PRIMARY	4D	38,000	10,400	22,313	0.59	
355	Dillon Rd.	N. of Vista Del Sur		PRIMARY	4D	38,000	3,191	28,842	0.76	
356	Dillon Rd.	Vista Del Sur	Hwy. 86 (S)	PRIMARY	4D	38,000	7,593	33,769	0.89	NEAR CAPACITY
357	Dillon Rd.	Hwy. 86 (S)	Hwy. 111	PRIMARY	4D	38,000	11,602	33,976	0.89	NEAR CAPACITY
358	Vista Del Sur	E. of Dillon		SECONDARY	4U	28,000	N/A	12,064	0.43	

APPENDIX C-2

LA QUINTA TRAFFIC MODEL POST 2020 EXISTING GENERAL PLAN FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
293	Jefferson St.	Ave. 50	Ave. 52	MAJOR	6D	57,000	8,100	21,931	0.38	
294	Jefferson St.	Ave. 52	Ave. 54	MAJOR	6D	57,000	9,200	28,976	0.51	
295	Madison St.	Ave. 42	Indio Ave.	PRIMARY	4D	38,000	N/A	20,615	0.54	
296	Madison St.	Indio Ave.	Fred Waring Dr.	PRIMARY	4D	38,000	573	13,812	0.36	
297	Madison St.	Fred Waring Dr.	Miles Ave.	SECONDARY	4U	28,000	7,782	11,786	0.42	
298	Madison St.	Miles Ave.	Hwy. 111	SECONDARY	4U	28,000	7,782	9,606	0.34	
299	Madison St.	Hwy. 111	Ave. 48	PRIMARY	4D	38,000	6,664	33,625	0.88	NEAR CAPACITY
300	Madison St.	Ave. 48	Ave. 50	PRIMARY	4D	38,000	N/A	28,173	0.74	
301	Madison St.	Ave. 50	Ave. 52	PRIMARY	4D	38,000	464	20,957	0.55	
302	Madison St.	Ave. 52	Ave. 54	PRIMARY	4D	38,000	N/A	21,997	0.58	
303	Madison St.	Ave. 54	Airport Blvd.	MAJOR	6D	57,000	2,309	35,674	0.63	
304	Madison St.	Airport Blvd.	Ave. 58	MAJOR	6D	57,000	1,900	39,308	0.69	
305	Madison St.	Ave. 58	Ave. 60	SECONDARY	4U	28,000	400	14,693	0.52	
306	Not Used									
307	Ave. 62	W. of Madison St.		SECONDARY	4U	28,000	N/A	8,773	0.31	
308	Monroe St.	Ave. 42	I-10	PRIMARY	4D	38,000	11,000	19,882	0.52	
309	Monroe St.	I-10	Indio Ave.	PRIMARY	4D	38,000	N/A	30,428	0.80	
310	Monroe St.	Indio Ave.	Miles Ave.	PRIMARY	4D	38,000	N/A	31,673	0.83	NEAR CAPACITY
311	Monroe St.	Miles Ave.	Hwy. 111	PRIMARY	4D	38,000	18,400	34,768	0.91	NEAR CAPACITY
312	Monroe St.	Hwy. 111	Ave. 48	PRIMARY	4D	38,000	N/A	19,842	0.52	
313	Monroe St.	Ave. 48	Ave. 50	PRIMARY	4D	38,000	9,000	18,097	0.48	
314	Monroe St.	Ave. 50	Ave. 52	PRIMARY	4D	38,000	4,700	21,524	0.57	
315	Monroe St.	Ave. 52	Ave. 54	PRIMARY	4D	38,000	3,100	14,775	0.39	
316	Monroe St.	Ave. 54	Airport Blvd.	PRIMARY	4D	38,000	2,200	14,872	0.39	
317	Monroe St.	Airport Blvd.	Ave. 58	PRIMARY	4D	38,000	2,200	8,923	0.23	
318	Monroe St.	Ave. 58	Ave. 60	PRIMARY	4D	38,000	1,100	8,383	0.22	
319	Monroe St.	Ave. 60	Ave. 62	SECONDARY	4U	28,000	1,100	10,484	0.37	
320	Jackson St.	Ave. 42	I-10	PRIMARY	4D	38,000	N/A	16,945	0.45	
321	Jackson St.	I-10	Indio Ave.	PRIMARY	4D	38,000	5,400	26,769	0.70	
322	Jackson St.	Indio Ave.	Hwy. 111	PRIMARY	4D	38,000	N/A	34,768	0.91	NEAR CAPACITY
323	Jackson St.	Hwy. 111	Ave. 48	PRIMARY	4D	38,000	9,500	19,842	0.52	
324	Jackson St.	Ave. 48	Ave. 50	PRIMARY	4D	38,000	7,200	7,920	0.21	
325	Jackson St.	Ave. 50	Ave. 52	PRIMARY	4D	38,000	5,900	6,490	0.17	

APPENDIX C-2

LA QUINTA TRAFFIC MODEL POST 2020 EXISTING GENERAL PLAN FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
392	Hovley Ln.	Oasis Club Dr.	Washington St.	PRIMARY	4D	38,000	N/A	29,910	0.79	
393	42nd Ave.	Washington St.	Country Club Dr.	PRIMARY	4D	38,000	9,300	19,433	0.51	
394	Fred Waring Dr.	Oasis Club Dr.	Washington St.	MAJOR	6D	57,000	20,876	55,573	0.97	NEAR CAPACITY
395	Fred Waring Dr.	Washington St.	Adams St.	PRIMARY	4D	38,000	17,500	31,998	0.84	NEAR CAPACITY
396	Fred Waring Dr.	Adams St.	Dune Palms Rd.	PRIMARY	4D	38,000	14,350	32,139	0.85	NEAR CAPACITY
397	Fred Waring Dr.	Dune Palms Rd.	Jefferson St.	PRIMARY	4D	38,000	11,200	30,169	0.79	
398	Fred Waring Dr.	Jefferson St.	Madison St.	PRIMARY	4D	38,000	12,522	26,584	0.70	
399	Fred Waring Dr.	Madison St.	Monroe St.	PRIMARY	4D	38,000	7,900	19,612	0.52	
400	Avenue 50	E. of Filmore	I-10	MAJOR	6D	57,000	N/A	22,572	0.40	
401	Miles Ave.	Hwy. 111	Washington St.	PRIMARY	4D	38,000	3,800	11,227	0.30	
402	Miles Ave.	Washington St.	Adams St.	PRIMARY	4D	38,000	6,600	18,064	0.48	
403	Miles Ave.	Adams St.	Dune Palms Rd.	PRIMARY	4D	38,000	6,700	12,791	0.34	
404	Miles Ave.	Dune Palms Rd.	Jefferson St.	PRIMARY	4D	38,000	6,800	16,404	0.43	
405	Miles Ave.	Jefferson St.	Madison St.	SECONDARY	4U	28,000	11,500	15,062	0.54	
406	Miles Ave.	Madison St.	Monroe St.	SECONDARY	4U	28,000	10,500	15,530	0.55	
407	Miles Ave.	Monroe St.	Jackson St.	SECONDARY	4U	28,000	4,457	4,903	0.18	
408	Westward Ho Dr.	Adams St.	Dune Palms Rd.	COLLECTOR	2U	14,000	N/A	3,201	0.23	
409	Westward Ho Dr.	Dune Palms Rd.	Jefferson St.	COLLECTOR	2U	14,000	N/A	2,322	0.17	
410	Westward Ho Dr.	E. of Jefferson St.		COLLECTOR	2U	14,000	N/A	2,000	0.14	
411	Hwy. 111	El Dorado Dr.	Miles Ave.	AUG. MAJOR	8D	76,000	29,000	70,380	0.93	NEAR CAPACITY
412	Hwy. 111	Miles Ave.	Washington St.	AUG. MAJOR	8D	76,000	31,076	60,636	0.80	
413	Hwy. 111	Washington St.	Adams St.	MAJOR	6D	57,000	23,300	60,341	1.06	OVER CAPACITY
414	Hwy. 111	Adams St.	Dune Palms Rd.	MAJOR	6D	57,000	19,800	40,861	0.72	
415	Hwy. 111	Dune Palms Rd.	Jefferson St.	MAJOR	6D	57,000	19,800	48,036	0.84	NEAR CAPACITY
416	Hwy. 111	Jefferson St.	Madison St.	MAJOR	6D	57,000	20,700	57,823	1.01	OVER CAPACITY
417	Hwy. 111	Madison St.	Monroe St.	MAJOR	6D	57,000	28,000	40,244	0.71	
418	Hwy. 111	Monroe St.	Jackson St.	MAJOR	6D	57,000	25,000	48,013	0.84	NEAR CAPACITY
419	Hwy. 111	Jackson St.	Auto Center Dr.	MAJOR	6D	57,000	13,800	50,986	0.89	NEAR CAPACITY
420	Ave. 48	Washington St.	Adams St.	PRIMARY	4D	38,000	6,300	12,006	0.32	
421	Ave. 48	Adams St.	Dune Palms Rd.	PRIMARY	4D	38,000	6,300	26,723	0.70	
422	Ave. 48	Dune Palms Rd.	Jefferson St.	PRIMARY	4D	38,000	6,300	35,122	0.92	NEAR CAPACITY
423	Ave. 48	Jefferson St.	Madison St.	PRIMARY	4D	38,000	7,600	23,336	0.61	
424	Ave. 48	Madison St.	Monroe St.	PRIMARY	4D	38,000	7,050	27,860	0.73	

APPENDIX C-2

LA QUINTA TRAFFIC MODEL POST 2020 EXISTING GENERAL PLAN FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
359	Tyler St.	Vista Del Sur	Ave. 50	SECONDARY	4U	28,000	N/A	15,566	0.56	
360	Tyler St.	Ave. 50	Ave. 52	COLLECTOR	2U	14,000	N/A	9,350	0.67	
361	Dillon Rd.	I-10	Vista Del Sur	PRIMARY	4D	38,000	N/A	35,532	0.94	NEAR CAPACITY
362	Tyler St.	Grapefruit Blvd.	Ave. 54	PRIMARY	4D	38,000	1,100	12,296	0.32	
363	Tyler St.	Ave. 54	Airport Blvd.	PRIMARY	4D	38,000	N/A	7,721	0.20	
364	Tyler St.	Ave. 60	Ave. 62	COLLECTOR	2U	14,000	N/A	4,072	0.29	
365	Tyler St.	Ave. 62	Ave. 64	COLLECTOR	2U	14,000	N/A	3,854	0.28	
366	Tyler St.	Ave. 64	Ave. 66	COLLECTOR	2U	14,000	N/A	2,000	0.14	
367	Polk St.	Airport Blvd.	Ave. 58	SECONDARY	4U	28,000	1,600	14,459	0.52	
368	Polk St.	Ave. 58	Ave. 60	SECONDARY	4U	28,000	N/A	12,679	0.45	
369	Polk St.	Ave. 60	Ave. 62	SECONDARY	4U	28,000	N/A	9,088	0.32	
370	Polk St.	Ave. 62	Ave. 64	SECONDARY	4U	28,000	N/A	5,549	0.20	
371	Polk St.	Ave. 64	Ave. 66	SECONDARY	4U	28,000	N/A	3,721	0.13	
372	Avenue 50	SR-86 (S)	Vista Del Sur	MAJOR	6D	57,000	N/A	58,460	1.03	OVER CAPACITY
373	Filmore St.	Ave. 58	Ave. 60	COLLECTOR	2U	14,000	N/A	2,000	0.14	
374	Filmore St.	Ave. 60	Ave. 62	COLLECTOR	2U	14,000	N/A	2,000	0.14	
375	Filmore St.	Ave. 62	Ave. 64	COLLECTOR	2U	14,000	N/A	2,000	0.14	
376	Filmore St.	Ave. 64	Ave. 66	COLLECTOR	2U	14,000	N/A	2,000	0.14	
377	Filmore St.	Ave. 50	Ave. 52	SECONDARY	4U	28,000	N/A	16,843	0.60	
378	Filmore St.	Ave. 52	Ave. 54	SECONDARY	4U	28,000	N/A	10,461	0.37	
379	Filmore St.	Ave. 54	Airport Blvd.	SECONDARY	4U	28,000	N/A	13,113	0.47	
380	Ave. 50	N. of I-10		PRIMARY	4D	38,000	N/A	9,277	0.24	
381	Ave. 50	E. of Filmore	Filmore St.	MAJOR	6D	57,000	N/A	44,068	0.77	
382	Pierce St.	Ave. 52	Ave. 54	SECONDARY	4U	28,000	200	2,000	0.07	
383	Pierce St.	Ave. 54	Airport Blvd.	SECONDARY	4U	28,000	N/A	2,000	0.07	
384	Pierce St.	Airport Blvd.	Ave. 60	COLLECTOR	2U	14,000	N/A	2,000	0.14	
385	Pierce St.	Grapefruit Blvd.	Ave. 62	SECONDARY	4U	28,000	2,400	2,640	0.09	
386	Pierce St.	Ave. 62	Ave. 64	SECONDARY	4U	28,000	N/A	2,000	0.07	
387	Pierce St.	Ave. 64	Ave. 66	SECONDARY	4U	28,000	N/A	2,000	0.07	
388	Pierce St.	S. of Ave. 66		SECONDARY	4U	28,000	N/A	3,134	0.11	
389	Country Club Dr.	Oasis Club Dr.	Washington St.	PRIMARY	4D	38,000	17,741	38,997	1.03	OVER CAPACITY
390	Country Club Dr.	Washington St.	42nd Ave.	PRIMARY	4D	38,000	7,000	11,192	0.29	
391	Country Club Dr.	42nd Ave.	Jefferson St.	PRIMARY	4D	38,000	12,200	31,218	0.82	NEAR CAPACITY

APPENDIX C-2

LA QUINTA TRAFFIC MODEL POST 2020 EXISTING GENERAL PLAN FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
458	Ave. 54	HWY 86 (S)	Filmore St.	SECONDARY	4U	28,000	100	6,917	0.25	
459	Ave. 54	Filmore St.	Pierce St.	COLLECTOR	2U	14,000	400	2,000	0.14	
460	Airport Blvd.	Madison St.	Monroe St.	PRIMARY	4D	38,000	800	13,073	0.34	
461	Airport Blvd.	Monroe St.	Jackson St.	PRIMARY	4D	38,000	2,300	11,330	0.30	
462	Airport Blvd.	Jackson St.	Van Buren St.	PRIMARY	4D	38,000	2,817	21,498	0.57	
463	Airport Blvd.	Van Buren St.	Harrison St.	PRIMARY	4D	38,000	3,333	17,358	0.46	
464	Airport Blvd.	Harrison St.	Tyler St.	PRIMARY	4D	38,000	3,826	10,353	0.27	
465	Airport Blvd.	Tyler St.	Polk St.	PRIMARY	4D	38,000	3,963	13,861	0.36	
466	Airport Blvd.	Polk St.	Hwy. 111	MAJOR	6D	57,000	4,100	22,420	0.39	
467	Airport Blvd.	Hwy. 111	HWY 86 (S)	MAJOR	6D	57,000	N/A	29,793	0.52	
468	Airport Blvd.	HWY 86 (S)	Filmore St.	PRIMARY	4D	38,000	N/A	15,234	0.40	
469	Airport Blvd.	Filmore St.	Pierce St.	PRIMARY	4D	38,000	N/A	2,014	0.05	
470	Ave. 58	Madison St.	Monroe St.	SECONDARY	4U	28,000	800	4,276	0.15	
471	Ave. 58	Monroe St.	Jackson St.	SECONDARY	4U	28,000	1,100	4,508	0.16	
472	Ave. 58	Jackson St.	Van Buren St.	SECONDARY	4U	28,000	N/A	3,902	0.14	
473	Ave. 58	Van Buren St.	Harrison St.	SECONDARY	4U	28,000	N/A	3,138	0.11	
474	Ave. 58	Polk St.	Filmore St.	COLLECTOR	2U	14,000	N/A	2,000	0.14	
475	Ave. 60	Madison St.	Monroe St.	SECONDARY	4U	28,000	200	8,423	0.30	
476	Ave. 60	Monroe St.	Jackson St.	PRIMARY	4D	38,000	300	6,130	0.16	
477	Ave. 60	Jackson St.	Van Buren St.	PRIMARY	4D	38,000	N/A	4,577	0.12	
478	Ave. 60	Van Buren St.	Harrison St.	PRIMARY	4D	38,000	N/A	11,155	0.29	
479	Ave. 60	Harrison St.	Tyler St.	PRIMARY	4D	38,000	N/A	29,419	0.77	
480	Ave. 60	Tyler St.	Ave. 62	PRIMARY	4D	38,000	N/A	14,260	0.38	
481	Ave. 60	Polk St.	Filmore St.	COLLECTOR	2U	14,000	N/A	2,000	0.14	
482	Ave. 60	Filmore St.	Grapefruit Blvd.	COLLECTOR	2U	14,000	N/A	2,000	0.14	
483	Ave. 60	E. of Pierce St.		COLLECTOR	2U	14,000	N/A	2,000	0.14	
484	Ave. 62	Madison St.	Monroe St.	SECONDARY	4U	28,000	N/A	19,262	0.69	
485	Ave. 62	Monroe St.	Jackson St.	SECONDARY	4U	28,000	1,100	12,623	0.45	
486	Ave. 62	Jackson St.	Van Buren St.	SECONDARY	4U	28,000	N/A	10,777	0.38	
487	Ave. 62	Van Buren St.	Harrison St.	SECONDARY	4U	28,000	N/A	11,574	0.41	
488	Ave. 62	Harrison St.	Tyler St.	SECONDARY	4U	28,000	N/A	5,440	0.19	
489	Ave. 62	Tyler St.	Ave. 60	SECONDARY	4U	28,000	N/A	4,150	0.15	
490	Ave. 62	Polk St.	Filmore St.	PRIMARY	4D	38,000	N/A	7,040	0.19	

APPENDIX C-2

LA QUINTA TRAFFIC MODEL POST 2020 EXISTING GENERAL PLAN FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
425	Ave. 48	Monroe St.	Jackson St.	PRIMARY	4D	38,000	6,500	24,993	0.66	
426	Ave. 48	Jackson St.	Van Buren St.	PRIMARY	4D	38,000	5,400	22,033	0.58	
427	Ave. 48	Van Buren St.	Hwy. 111	PRIMARY	4D	38,000	3,800	32,893	0.87	NEAR CAPACITY
428	Ave. 50	Eisenhower Dr.	Washington St.	PRIMARY	4D	38,000	3,900	25,816	0.68	
429	Ave. 50	Washington St.	Jefferson St.	PRIMARY	4D	38,000	7,837	25,737	0.68	
430	Ave. 50	Jefferson St.	Madison St.	PRIMARY	4D	38,000	5,885	17,563	0.46	
431	Ave. 50	Madison St.	Monroe St.	PRIMARY	4D	38,000	3,300	23,780	0.63	
432	Ave. 50	Monroe St.	Jackson St.	PRIMARY	4D	38,000	9,400	23,134	0.61	
433	Ave. 50	Jackson St.	Van Buren St.	PRIMARY	4D	38,000	5,412	22,749	0.60	
434	Ave. 50	Van Buren St.	Harrison St.	PRIMARY	4D	38,000	9,800	24,592	0.65	
435	Ave. 50	Grapefruit Blvd.	Tyler St.	MAJOR	6D	57,000	4,600	33,048	0.58	
436	Ave. 50	Tyler St.	HWY 86 (S)	MAJOR	6D	57,000	4,600	38,672	0.68	
437	Ave. 50	HWY 86 (S)	Filmore St.	MAJOR	6D	57,000	N/A	55,435	0.97	NEAR CAPACITY
438	Calle Tampico	W. of Washington St.		COLLECTOR	2U	14,000	N/A	5,778	0.41	
439	Ave. 52	Washington St.	Jefferson St.	PRIMARY	4D	38,000	8,545	26,692	0.70	
440	Ave. 52	Jefferson St.	Madison St.	PRIMARY	4D	38,000	4,847	19,789	0.52	
441	Ave. 52	Madison St.	Monroe St.	PRIMARY	4D	38,000	3,700	16,984	0.45	
442	Ave. 52	Monroe St.	Jackson St.	PRIMARY	4D	38,000	3,700	22,083	0.58	
443	Ave. 52	Jackson St.	Van Buren St.	PRIMARY	4D	38,000	5,500	15,933	0.42	
444	Ave. 52	Van Buren St.	Harrison St.	PRIMARY	4D	38,000	6,255	15,554	0.41	
445	Ave. 52	Harrison St.	Hwy. 111	PRIMARY	4D	38,000	9,943	17,923	0.47	
446	Ave. 52	Hwy. 111	Tyler St.	MAJOR	6D	57,000	8,600	27,963	0.49	
447	Ave. 52	Tyler St.	HWY 86 (S)	MAJOR	6D	57,000	N/A	21,046	0.37	
448	Ave. 52	HWY 86 (S)	Filmore St.	PRIMARY	4D	38,000	600	18,115	0.48	
449	Ave. 52	Filmore St.	Pierce St.	PRIMARY	4D	38,000	600	2,000	0.05	
450	Ave. 54	Jefferson St.	Madison St.	PRIMARY	4D	38,000	2,800	14,502	0.38	
451	Ave. 54	Madison St.	Monroe St.	SECONDARY	4U	28,000	600	2,000	0.07	
452	Ave. 54	Monroe St.	Jackson St.	SECONDARY	4U	28,000	800	2,000	0.07	
453	Ave. 54	Jackson St.	Van Buren St.	SECONDARY	4U	28,000	1,077	2,000	0.07	
454	Ave. 54	Van Buren St.	Harrison St.	SECONDARY	4U	28,000	1,353	3,563	0.13	
455	Ave. 54	Harrison St.	Tyler St.	SECONDARY	4U	28,000	1,800	7,949	0.28	
456	Ave. 54	Tyler St.	Hwy. 111	SECONDARY	4U	28,000	855	6,606	0.24	
457	Ave. 54	Hwy. 111	HWY 86 (S)	SECONDARY	4U	28,000	619	10,419	0.37	

APPENDIX C-2

LA QUINTA TRAFFIC MODEL POST 2020 EXISTING GENERAL PLAN FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
524	Hwy. 86	Ave. 50	Ave. 52	FREEWAY	8D	160,000	6,000	54,489	0.34	
525	Not Used									
526	Hwy. 86	Ave. 52	Airport Blvd.	FREEWAY	8D	160,000	6,000	30,995	0.19	
527	Hwy. 86	Airport Blvd.	Ave. 62	FREEWAY	8D	160,000	5,800	30,995	0.19	
528	Hwy. 86	Ave. 62	Ave. 66	FREEWAY	8D	160,000	11,000	23,418	0.15	
529	Hwy. 86	S. of Ave. 66		FREEWAY	8D	160,000	10,400	17,310	0.11	
530	Indio Ave.	Madison St.	Monroe St.	PRIMARY	4D	38,000	N/A	23,771	0.63	
531	Indio Ave.	Monroe St.	Jackson St.	PRIMARY	4D	38,000	N/A	32,087	0.84	NEAR CAPACITY
532	Indio Ave.	Jackson St.	Auto Center Dr.	PRIMARY	4D	38,000	N/A	32,084	0.84	NEAR CAPACITY
533	Hwy. 86/111	Auto Center Dr.	Dillon Rd.	PRIMARY	4D	38,000	26,000	41,792	1.10	OVER CAPACITY
534	Hwy. 111	Dillon Rd.	Ave. 50	MAJOR	6D	57,000	34,500	52,473	0.92	NEAR CAPACITY
535	Hwy. 111	Ave. 50	Ave. 52	PRIMARY	4D	38,000	10,900	23,361	0.61	
536	Hwy. 111	Ave. 52	Tyler St.	PRIMARY	4D	38,000	9,000	35,799	0.94	NEAR CAPACITY
537	Hwy. 111	Tyler St.	Ave. 54	PRIMARY	4D	38,000	9,000	20,542	0.54	
538	Hwy. 111	Ave. 54	Airport Blvd.	PRIMARY	4D	38,000	9,000	21,180	0.56	
539	Hwy. 111	Airport Blvd.	Filmore St.	PRIMARY	4D	38,000	8,500	30,823	0.81	NEAR CAPACITY
540	Grapefruit Blvd.	Filmore St.	Ave. 60	PRIMARY	4D	38,000	6,300	20,107	0.53	
541	Grapefruit Blvd.	Ave. 60	Pierce	PRIMARY	4D	38,000	6,300	14,989	0.39	
542	Grapefruit Blvd.	Pierce	Ave. 62	PRIMARY	4D	38,000	6,300	13,166	0.35	
543	Grapefruit Blvd.	Ave. 62	Ave. 64	PRIMARY	4D	38,000	6,300	21,063	0.55	
544	Grapefruit Blvd.	S. of Ave. 64		PRIMARY	4D	38,000	5,900	21,001	0.55	
545	Ave. 58	W. of Madison St.		SECONDARY	4U	28,000	N/A	14,238	0.51	

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APPENDIX C-2

LA QUINTA TRAFFIC MODEL POST 2020 EXISTING GENERAL PLAN FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
491	Ave. 62	Filmore St.	Pierce St.	PRIMARY	4D	38,000	N/A	5,976	0.16	
492	Ave. 62	Pierce St.	Grapefruit Blvd.	PRIMARY	4D	38,000	N/A	6,352	0.17	
493	Ave. 62	Grapefruit Blvd.	HWY 86 (S)	PRIMARY	4D	38,000	N/A	10,402	0.27	
494	Ave. 62	E. OF HWY 86 (S)		SECONDARY	4U	28,000	N/A	2,000	0.07	
495	Not Used									
496	Ave. 64	Jackson St.	Van Buren St.	COLLECTOR	2U	14,000	N/A	2,000	0.14	
497	Ave. 64	Van Buren St.	Harrison St.	COLLECTOR	2U	14,000	N/A	2,533	0.18	
498	Ave. 64	Harrison St.	Tyler St.	COLLECTOR	2U	14,000	N/A	2,262	0.16	
499	Ave. 64	Tyler St.	Polk St.	COLLECTOR	2U	14,000	N/A	2,000	0.14	
500	Ave. 64	Polk St.	Filmore St.	COLLECTOR	2U	14,000	N/A	2,000	0.14	
501	Ave. 64	Filmore St.	Pierce St.	COLLECTOR	2U	14,000	N/A	2,000	0.14	
502	Ave. 64	Pierce St.	HWY 86 (S)	COLLECTOR	2U	14,000	N/A	2,000	0.14	
503	Ave. 66	Jackson St.	Van Buren St.	SECONDARY	4U	28,000	N/A	2,000	0.07	
504	Ave. 66	Van Buren St.	Harrison St.	SECONDARY	4U	28,000	N/A	2,000	0.07	
505	Ave. 66	Harrison St.	Tyler St.	PRIMARY	4D	38,000	N/A	4,945	0.13	
506	Ave. 66	Tyler St.	Polk St.	PRIMARY	4D	38,000	N/A	5,096	0.13	
507	Ave. 66	Polk St.	Filmore St.	PRIMARY	4D	38,000	N/A	3,329	0.09	
508	Ave. 66	Filmore St.	Pierce St. (W)	PRIMARY	4D	38,000	N/A	4,224	0.11	
509	Ave. 66	Pierce St. (W)	Pierce St. (E)	PRIMARY	4D	38,000	N/A	3,803	0.10	
510	Ave. 66	Pierce St. (E)	HWY 86 (S)	PRIMARY	4D	38,000	N/A	4,860	0.13	
511	Ave. 66	E. OF HWY 86 (S)		COLLECTOR	2U	14,000	N/A	2,421	0.17	
512	I-10	Cook St.	Washington St.	FREEWAY	8D	160,000	47,000	180,894	1.13	OVER CAPACITY
513	I-10	Washington St.	Jefferson St.	FREEWAY	8D	160,000	40,000	152,963	0.96	NEAR CAPACITY
514	Not Used									
515	I-10	Jefferson St.	Monroe St.	FREEWAY	8D	160,000	31,500	129,715	0.81	NEAR CAPACITY
516	I-10	Monroe St.	Jackson St.	FREEWAY	8D	160,000	29,000	116,322	0.73	
517	I-10	Jackson St.	Auto Center Dr.	FREEWAY	8D	160,000	28,000	113,166	0.71	
518	I-10	Auto Center Dr.	Hwy. 86	FREEWAY	8D	160,000	25,500	144,199	0.90	NEAR CAPACITY
519	I-10	Hwy. 86	Dillon Rd.	FREEWAY	8D	160,000	16,600	59,944	0.37	
520	I-10	Dillon Rd.	Ave. 50	FREEWAY	8D	160,000	17,200	40,031	0.25	
521	I-10	E. of Ave. 50		FREEWAY	8D	160,000	17,200	27,593	0.17	
522	Hwy. 86	I-10	Dillon Rd.	FREEWAY	8D	160,000	9,600	84,256	0.53	
523	Hwy. 86	Dillon Rd.	Ave. 50	FREEWAY	8D	160,000	6,000	79,759	0.50	

APPENDIX C-3

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN HIGH ALTERNATIVE FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
293	Jefferson St.	Ave. 50	Ave. 52	MAJOR	6D	57,000	8,100	32,283	0.57	
294	Jefferson St.	Ave. 52	Ave. 54	MAJOR	6D	57,000	9,200	48,503	0.85	NEAR CAPACITY
295	Madison St.	Ave. 42	Indio Ave.	PRIMARY	4D	38,000	N/A	22,395	0.59	
296	Madison St.	Indio Ave.	Fred Waring Dr.	PRIMARY	4D	38,000	573	14,587	0.38	
297	Madison St.	Fred Waring Dr.	Miles Ave.	SECONDARY	4U	28,000	7,782	12,763	0.46	
298	Madison St.	Miles Ave.	Hwy. 111	SECONDARY	4U	28,000	7,782	9,832	0.35	
299	Madison St.	Hwy. 111	Ave. 48	PRIMARY	4D	38,000	6,664	36,832	0.97	NEAR CAPACITY
300	Madison St.	Ave. 48	Ave. 50	PRIMARY	4D	38,000	N/A	33,499	0.88	NEAR CAPACITY
301	Madison St.	Ave. 50	Ave. 52	PRIMARY	4D	38,000	464	27,514	0.72	
302	Madison St.	Ave. 52	Ave. 54	PRIMARY	4D	38,000	N/A	26,318	0.69	
303	Madison St.	Ave. 54	Airport Blvd.	MAJOR	6D	57,000	2,309	45,176	0.79	
304	Madison St.	Airport Blvd.	Ave. 58	MAJOR	6D	57,000	1,900	42,474	0.75	
305	Madison St.	Ave. 58	Ave. 60	SECONDARY	4U	28,000	400	17,193	0.61	
306	Not Used									
307	Ave. 62	W. of Madison St.		SECONDARY	4U	28,000	N/A	8,562	0.31	
308	Monroe St.	Ave. 42	I-10	PRIMARY	4D	38,000	11,000	20,764	0.55	
309	Monroe St.	I-10	Indio Ave.	PRIMARY	4D	38,000	N/A	33,478	0.88	NEAR CAPACITY
310	Monroe St.	Indio Ave.	Miles Ave.	PRIMARY	4D	38,000	N/A	35,904	0.94	NEAR CAPACITY
311	Monroe St.	Miles Ave.	Hwy. 111	PRIMARY	4D	38,000	18,400	39,523	1.04	OVER CAPACITY
312	Monroe St.	Hwy. 111	Ave. 48	PRIMARY	4D	38,000	N/A	27,642	0.73	
313	Monroe St.	Ave. 48	Ave. 50	PRIMARY	4D	38,000	9,000	26,024	0.68	
314	Monroe St.	Ave. 50	Ave. 52	PRIMARY	4D	38,000	4,700	29,094	0.77	
315	Monroe St.	Ave. 52	Ave. 54	PRIMARY	4D	38,000	3,100	24,513	0.65	
316	Monroe St.	Ave. 54	Airport Blvd.	PRIMARY	4D	38,000	2,200	26,143	0.69	
317	Monroe St.	Airport Blvd.	Ave. 58	PRIMARY	4D	38,000	2,200	14,057	0.37	
318	Monroe St.	Ave. 58	Ave. 60	PRIMARY	4D	38,000	1,100	13,030	0.34	
319	Monroe St.	Ave. 60	Ave. 62	SECONDARY	4U	28,000	1,100	12,757	0.46	
320	Jackson St.	Ave. 42	I-10	PRIMARY	4D	38,000	N/A	18,104	0.48	
321	Jackson St.	I-10	Indio Ave.	PRIMARY	4D	38,000	5,400	31,818	0.84	NEAR CAPACITY
322	Jackson St.	Indio Ave.	Hwy. 111	PRIMARY	4D	38,000	N/A	39,523	1.04	OVER CAPACITY
323	Jackson St.	Hwy. 111	Ave. 48	PRIMARY	4D	38,000	9,500	27,642	0.73	
324	Jackson St.	Ave. 48	Ave. 50	PRIMARY	4D	38,000	7,200	11,977	0.32	
325	Jackson St.	Ave. 50	Ave. 52	PRIMARY	4D	38,000	5,900	10,811	0.28	

APPENDIX C-3

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN HIGH ALTERNATIVE FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
260	Washington St.	N. of Varner Rd.		MAJOR	6D	57,000	7,109	32,585	0.57	
261	Washington St.	I-10 Fwy.	Country Club Dr.	AUG. MAJOR	8D	76,000	24,000	76,570	1.01	OVER CAPACITY
262	Washington St.	Country Club Dr.	42nd St.	MAJOR	6D	57,000	24,000	53,581	0.94	NEAR CAPACITY
263	Washington St.	42nd St.	Ave. 44	MAJOR	6D	57,000	27,000	55,630	0.98	NEAR CAPACITY
264	Washington St.	Ave. 44	Miles Ave.	MAJOR	6D	57,000	25,250	68,858	1.21	OVER CAPACITY
265	Washington St.	Miles Ave.	Hwy. 111	MAJOR	6D	57,000	23,500	66,290	1.16	OVER CAPACITY
266	Washington St.	Hwy. 111	Ave. 48	AUG. MAJOR	8D	76,000	29,500	67,841	0.89	NEAR CAPACITY
267	Washington St.	Ave. 48	Eisenhower Dr.	AUG. MAJOR	8D	76,000	25,600	63,552	0.84	NEAR CAPACITY
268	Washington St.	Eisenhower Dr.	Ave. 50	MAJOR	6D	57,000	21,700	54,324	0.95	NEAR CAPACITY
269	Washington St.	Ave. 50	Calle Tampico	MAJOR	6D	57,000	17,200	40,015	0.70	
270	Washington St.	Calle Tampico	Ave. 52	MAJOR	6D	57,000	17,200	39,583	0.69	
271	Eisenhower Dr.	Washington St.	Ave. 50	SECONDARY	4U	28,000	13,000	14,300	0.51	
272	Eisenhower Dr.	Ave. 50	Calle Tampico	SECONDARY	4U	28,000	14,000	15,400	0.55	
273	Eisenhower Dr.	Calle Tampico	Avenida Bermudas	SECONDARY	4U	28,000	14,000	15,400	0.55	
274	Not Used									
275	Avenida Bermudas	Ave. 52	Eisenhower Dr.	SECONDARY	4U	28,000	11,100	12,210	0.44	
276	Adams St.	Ave. 44	Miles Ave.	SECONDARY	4U	28,000	N/A	4,867	0.17	
277	Adams St.	Miles Ave.	Westward Ho Dr.	SECONDARY	4U	28,000	N/A	10,786	0.39	
278	Adams St.	Westward Ho Dr.	Hwy. 111	SECONDARY	4U	28,000	N/A	11,168	0.40	
279	Adams St.	Hwy. 111	Ave. 48	SECONDARY	4U	28,000	N/A	28,813	1.03	OVER CAPACITY
280	Dunes Palms Rd.	Ave. 44	Miles Ave.	SECONDARY	4U	28,000	N/A	2,676	0.10	
281	Dunes Palms Rd.	Miles Ave.	Westward Ho Dr.	SECONDARY	4U	28,000	N/A	4,281	0.15	
282	Dunes Palms Rd.	Westward Ho Dr.	Hwy. 111	SECONDARY	4U	28,000	1,400	10,273	0.37	
283	Dunes Palms Rd.	Hwy. 111	Ave. 48	SECONDARY	4U	28,000	900	14,055	0.50	
284	Jefferson St.	40th Ave.	I-10	MAJOR	6D	57,000	1,761	17,614	0.31	
285	Jefferson St.	I-10	Indio Ave.	MAJOR	6D	57,000	6,626	41,677	0.73	
286	Jefferson St.	Indio Ave.	Country Club Dr.	MAJOR	6D	57,000	11,300	45,421	0.80	
287	Jefferson St.	Country Club Dr.	Ave. 44	MAJOR	6D	57,000	13,000	38,541	0.68	
288	Jefferson St.	Ave. 44	Miles Ave.	MAJOR	6D	57,000	13,600	38,544	0.68	
289	Jefferson St.	Miles Ave.	Westward Ho Dr.	MAJOR	6D	57,000	10,800	34,468	0.60	
290	Jefferson St.	Westward Ho Dr.	Hwy. 111	MAJOR	6D	57,000	10,800	34,452	0.60	
291	Jefferson St.	Hwy. 111	Ave. 48	MAJOR	6D	57,000	13,786	37,845	0.66	
292	Jefferson St.	Ave. 48	Ave. 50	MAJOR	6D	57,000	11,700	48,635	0.85	NEAR CAPACITY

APPENDIX C-3

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN HIGH ALTERNATIVE FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
359	Tyler St.	Vista Del Sur	Ave. 50	SECONDARY	4U	28,000	N/A	16,555	0.59	
360	Tyler St.	Ave. 50	Ave. 52	COLLECTOR	2U	14,000	N/A	8,900	0.64	
361	Dillon Rd.	I-10	Vista Del Sur	PRIMARY	4D	38,000	N/A	37,423	0.98	NEAR CAPACITY
362	Tyler St.	Grapefruit Blvd.	Ave. 54	PRIMARY	4D	38,000	1,100	12,356	0.33	
363	Tyler St.	Ave. 54	Airport Blvd.	PRIMARY	4D	38,000	N/A	9,258	0.24	
364	Tyler St.	Ave. 60	Ave. 62	COLLECTOR	2U	14,000	N/A	4,948	0.35	
365	Tyler St.	Ave. 62	Ave. 64	COLLECTOR	2U	14,000	N/A	6,340	0.45	
366	Tyler St.	Ave. 64	Ave. 66	COLLECTOR	2U	14,000	N/A	2,000	0.14	
367	Polk St.	Airport Blvd.	Ave. 58	SECONDARY	4U	28,000	1,600	21,973	0.78	
368	Polk St.	Ave. 58	Ave. 60	SECONDARY	4U	28,000	N/A	17,830	0.64	
369	Polk St.	Ave. 60	Ave. 62	SECONDARY	4U	28,000	N/A	14,524	0.52	
370	Polk St.	Ave. 62	Ave. 64	SECONDARY	4U	28,000	N/A	10,613	0.38	
371	Polk St.	Ave. 64	Ave. 66	SECONDARY	4U	28,000	N/A	6,368	0.23	
372	Avenue 50	SR-86 (S)	Vista Del Sur	MAJOR	6D	57,000	N/A	60,302	1.06	OVER CAPACITY
373	Filmore St.	Ave. 58	Ave. 60	COLLECTOR	2U	14,000	N/A	2,000	0.14	
374	Filmore St.	Ave. 60	Ave. 62	COLLECTOR	2U	14,000	N/A	2,000	0.14	
375	Filmore St.	Ave. 62	Ave. 64	COLLECTOR	2U	14,000	N/A	3,011	0.22	
376	Filmore St.	Ave. 64	Ave. 66	COLLECTOR	2U	14,000	N/A	2,170	0.16	
377	Filmore St.	Ave. 50	Ave. 52	SECONDARY	4U	28,000	N/A	18,023	0.64	
378	Filmore St.	Ave. 52	Ave. 54	SECONDARY	4U	28,000	N/A	11,515	0.41	
379	Filmore St.	Ave. 54	Airport Blvd.	SECONDARY	4U	28,000	N/A	13,901	0.50	
380	Ave. 50	N. of I-10		PRIMARY	4D	38,000	N/A	9,236	0.24	
381	Ave. 50	E. of Filmore	Filmore St.	MAJOR	6D	57,000	N/A	46,610	0.82	NEAR CAPACITY
382	Pierce St.	Ave. 52	Ave. 54	SECONDARY	4U	28,000	200	2,000	0.07	
383	Pierce St.	Ave. 54	Airport Blvd.	SECONDARY	4U	28,000	N/A	2,000	0.07	
384	Pierce St.	Airport Blvd.	Ave. 60	COLLECTOR	2U	14,000	N/A	2,000	0.14	
385	Pierce St.	Grapefruit Blvd.	Ave. 62	SECONDARY	4U	28,000	2,400	6,720	0.24	
386	Pierce St.	Ave. 62	Ave. 64	SECONDARY	4U	28,000	N/A	4,584	0.16	
387	Pierce St.	Ave. 64	Ave. 66	SECONDARY	4U	28,000	N/A	2,000	0.07	
388	Pierce St.	S. of Ave. 66		SECONDARY	4U	28,000	N/A	3,966	0.14	
389	Country Club Dr.	Oasis Club Dr.	Washington St.	PRIMARY	4D	38,000	17,741	39,447	1.04	OVER CAPACITY
390	Country Club Dr.	Washington St.	42nd Ave.	PRIMARY	4D	38,000	7,000	12,871	0.34	
391	Country Club Dr.	42nd Ave.	Jefferson St.	PRIMARY	4D	38,000	12,200	33,963	0.89	NEAR CAPACITY

APPENDIX C-3

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN HIGH ALTERNATIVE FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
326	Jackson St.	Ave. 52	Ave. 54	PRIMARY	4D	38,000	N/A	23,722	0.62	
327	Jackson St.	Ave. 54	Airport Blvd.	PRIMARY	4D	38,000	1,700	19,821	0.52	
328	Jackson St.	Airport Blvd.	Ave. 58	PRIMARY	4D	38,000	N/A	21,361	0.56	
329	Jackson St.	Ave. 58	Ave. 60	PRIMARY	4D	38,000	1,500	20,008	0.53	
330	Jackson St.	Ave. 60	Ave. 62	SECONDARY	4U	28,000	1,400	12,955	0.46	
331	Jackson St.	Ave. 62	Ave. 64	SECONDARY	4U	28,000	N/A	2,000	0.07	
332	Jackson St.	Ave. 64	Ave. 66	SECONDARY	4U	28,000	N/A	2,000	0.07	
333	Auto Center Dr.	Ave. 44	I-10	SECONDARY	4U	28,000	6,000	9,267	0.33	
334	Auto Center Dr.	I-10	Indio Ave.	PRIMARY	4D	38,000	6,100	41,075	1.08	OVER CAPACITY
335	Van Buren St.	Ave. 48	Ave. 50	PRIMARY	4D	38,000	3,000	35,206	0.93	NEAR CAPACITY
336	Van Buren St.	Ave. 50	Ave. 52	PRIMARY	4D	38,000	2,262	31,552	0.83	NEAR CAPACITY
337	Van Buren St.	Ave. 52	Ave. 54	PRIMARY	4D	38,000	1,100	29,591	0.78	
338	Van Buren St.	Ave. 54	Airport Blvd.	PRIMARY	4D	38,000	1,400	29,237	0.77	
339	Van Buren St.	Airport Blvd.	Ave. 58	PRIMARY	4D	38,000	1,300	29,318	0.77	
340	Van Buren St.	Ave. 58	Ave. 60	PRIMARY	4D	38,000	N/A	28,393	0.75	
341	Van Buren St.	Ave. 60	Ave. 62	SECONDARY	4U	28,000	N/A	19,981	0.71	
342	Van Buren St.	Ave. 62	Ave. 64	SECONDARY	4U	28,000	N/A	7,927	0.28	
343	Van Buren St.	Ave. 64	Ave. 66	SECONDARY	4U	28,000	N/A	5,743	0.21	
344	Van Buren St.	S. of Ave. 66		COLLECTOR	2U	14,000	N/A	2,000	0.14	
345	Harrison St.	Hwy. 111	Ave. 50	PRIMARY	4D	38,000	26,000	35,586	0.94	NEAR CAPACITY
346	Harrison St.	Ave. 50	Ave. 52	MAJOR	6D	57,000	25,500	45,408	0.80	
347	Harrison St.	Ave. 52	Ave. 54	MAJOR	6D	57,000	15,200	54,048	0.95	NEAR CAPACITY
348	Harrison St.	Ave. 54	Airport Blvd.	MAJOR	6D	57,000	12,000	54,191	0.95	NEAR CAPACITY
349	Harrison St.	Airport Blvd.	Ave. 58	MAJOR	6D	57,000	9,100	56,945	1.00	NEAR CAPACITY
350	Harrison St.	Ave. 58	Ave. 60	MAJOR	6D	57,000	9,100	54,143	0.95	NEAR CAPACITY
351	Harrison St.	Ave. 60	Ave. 62	MAJOR	6D	57,000	11,000	42,649	0.75	
352	Harrison St.	Ave. 62	Ave. 64	MAJOR	6D	57,000	11,000	41,568	0.73	
353	Harrison St.	Ave. 64	Ave. 66	PRIMARY	4D	38,000	11,000	35,883	0.94	NEAR CAPACITY
354	Harrison St.	S. of Ave. 66		PRIMARY	4D	38,000	10,400	23,867	0.63	
355	Dillon Rd.	N. of Vista Del Sur		PRIMARY	4D	38,000	3,191	29,229	0.77	
356	Dillon Rd.	Vista Del Sur	Hwy. 86 (S)	PRIMARY	4D	38,000	7,593	36,733	0.97	NEAR CAPACITY
357	Dillon Rd.	Hwy. 86 (S)	Hwy. 111	PRIMARY	4D	38,000	11,602	38,775	1.02	OVER CAPACITY
358	Vista Del Sur	E. of Dillon		SECONDARY	4U	28,000	N/A	11,476	0.41	

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN HIGH ALTERNATIVE FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
425	Ave. 48	Monroe St.	Jackson St.	PRIMARY	4D	38,000	6,500	27,631	0.73	
426	Ave. 48	Jackson St.	Van Buren St.	PRIMARY	4D	38,000	5,400	24,860	0.65	
427	Ave. 48	Van Buren St.	Hwy. 111	PRIMARY	4D	38,000	3,800	36,577	0.96	NEAR CAPACITY
428	Ave. 50	Eisenhower Dr.	Washington St.	PRIMARY	4D	38,000	3,900	29,800	0.78	
429	Ave. 50	Washington St.	Jefferson St.	PRIMARY	4D	38,000	7,837	28,097	0.74	
430	Ave. 50	Jefferson St.	Madison St.	PRIMARY	4D	38,000	5,885	23,543	0.62	
431	Ave. 50	Madison St.	Monroe St.	PRIMARY	4D	38,000	3,300	26,552	0.70	
432	Ave. 50	Monroe St.	Jackson St.	PRIMARY	4D	38,000	9,400	25,910	0.68	
433	Ave. 50	Jackson St.	Van Buren St.	PRIMARY	4D	38,000	5,412	25,519	0.67	
434	Ave. 50	Van Buren St.	Harrison St.	PRIMARY	4D	38,000	9,800	28,175	0.74	
435	Ave. 50	Grapefruit Blvd.	Tyler St.	MAJOR	6D	57,000	4,600	35,696	0.63	
436	Ave. 50	Tyler St.	HWY 86 (S)	MAJOR	6D	57,000	4,600	40,965	0.72	
437	Ave. 50	HWY 86 (S)	Filmore St.	MAJOR	6D	57,000	N/A	56,980	1.00	NEAR CAPACITY
438	Calle Tampico	W. of Washington St.		COLLECTOR	2U	14,000	N/A	6,286	0.45	
439	Ave. 52	Washington St.	Jefferson St.	PRIMARY	4D	38,000	8,545	33,952	0.89	NEAR CAPACITY
440	Ave. 52	Jefferson St.	Madison St.	PRIMARY	4D	38,000	4,847	28,562	0.75	
441	Ave. 52	Madison St.	Monroe St.	PRIMARY	4D	38,000	3,700	25,385	0.67	
442	Ave. 52	Monroe St.	Jackson St.	PRIMARY	4D	38,000	3,700	28,803	0.76	
443	Ave. 52	Jackson St.	Van Buren St.	PRIMARY	4D	38,000	5,500	22,225	0.58	
444	Ave. 52	Van Buren St.	Harrison St.	PRIMARY	4D	38,000	6,255	19,320	0.51	
445	Ave. 52	Harrison St.	Hwy. 111	PRIMARY	4D	38,000	9,943	21,410	0.56	
446	Ave. 52	Hwy. 111	Tyler St.	MAJOR	6D	57,000	8,600	30,213	0.53	
447	Ave. 52	Tyler St.	HWY 86 (S)	MAJOR	6D	57,000	N/A	22,241	0.39	
448	Ave. 52	HWY 86 (S)	Filmore St.	PRIMARY	4D	38,000	600	20,047	0.53	
449	Ave. 52	Filmore St.	Pierce St.	PRIMARY	4D	38,000	600	2,000	0.05	
450	Ave. 54	Jefferson St.	Madison St.	PRIMARY	4D	38,000	2,800	23,356	0.61	
451	Ave. 54	Madison St.	Monroe St.	SECONDARY	4U	28,000	600	5,015	0.18	
452	Ave. 54	Monroe St.	Jackson St.	SECONDARY	4U	28,000	800	2,310	0.08	
453	Ave. 54	Jackson St.	Van Buren St.	SECONDARY	4U	28,000	1,077	2,529	0.09	
454	Ave. 54	Van Buren St.	Harrison St.	SECONDARY	4U	28,000	1,353	6,865	0.25	
455	Ave. 54	Harrison St.	Tyler St.	SECONDARY	4U	28,000	1,800	10,730	0.38	
456	Ave. 54	Tyler St.	Hwy. 111	SECONDARY	4U	28,000	855	9,755	0.35	
457	Ave. 54	Hwy. 111	HWY 86 (S)	SECONDARY	4U	28,000	619	12,756	0.46	

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LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN HIGH ALTERNATIVE FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
392	Hovley Ln.	Oasis Club Dr.	Washington St.	PRIMARY	4D	38,000	N/A	33,576	0.88	NEAR CAPACITY
393	42nd Ave.	Washington St.	Country Club Dr.	PRIMARY	4D	38,000	9,300	21,547	0.57	
394	Fred Waring Dr.	Oasis Club Dr.	Washington St.	MAJOR	6D	57,000	20,876	60,768	1.07	OVER CAPACITY
395	Fred Waring Dr.	Washington St.	Adams St.	PRIMARY	4D	38,000	17,500	34,848	0.92	NEAR CAPACITY
396	Fred Waring Dr.	Adams St.	Dune Palms Rd.	PRIMARY	4D	38,000	14,350	35,209	0.93	NEAR CAPACITY
397	Fred Waring Dr.	Dune Palms Rd.	Jefferson St.	PRIMARY	4D	38,000	11,200	33,028	0.87	NEAR CAPACITY
398	Fred Waring Dr.	Jefferson St.	Madison St.	PRIMARY	4D	38,000	12,522	28,472	0.75	
399	Fred Waring Dr.	Madison St.	Monroe St.	PRIMARY	4D	38,000	7,900	20,723	0.55	
400	Avenue 50	E. of Filmore	I-10	MAJOR	6D	57,000	N/A	22,944	0.40	
401	Miles Ave.	Hwy. 111	Washington St.	PRIMARY	4D	38,000	3,800	11,288	0.30	
402	Miles Ave.	Washington St.	Adams St.	PRIMARY	4D	38,000	6,600	18,536	0.49	
403	Miles Ave.	Adams St.	Dune Palms Rd.	PRIMARY	4D	38,000	6,700	13,580	0.36	
404	Miles Ave.	Dune Palms Rd.	Jefferson St.	PRIMARY	4D	38,000	6,800	17,839	0.47	
405	Miles Ave.	Jefferson St.	Madison St.	SECONDARY	4U	28,000	11,500	15,548	0.56	
406	Miles Ave.	Madison St.	Monroe St.	SECONDARY	4U	28,000	10,500	16,761	0.60	
407	Miles Ave.	Monroe St.	Jackson St.	SECONDARY	4U	28,000	4,457	4,903	0.18	
408	Westward Ho Dr.	Adams St.	Dune Palms Rd.	COLLECTOR	2U	14,000	N/A	3,264	0.23	
409	Westward Ho Dr.	Dune Palms Rd.	Jefferson St.	COLLECTOR	2U	14,000	N/A	2,889	0.21	
410	Westward Ho Dr.	E. of Jefferson St.		COLLECTOR	2U	14,000	N/A	2,105	0.15	
411	Hwy. 111	El Dorado Dr.	Miles Ave.	AUG. MAJOR	8D	76,000	29,000	71,225	0.94	NEAR CAPACITY
412	Hwy. 111	Miles Ave.	Washington St.	AUG. MAJOR	8D	76,000	31,076	62,495	0.82	NEAR CAPACITY
413	Hwy. 111	Washington St.	Adams St.	MAJOR	6D	57,000	23,300	62,183	1.09	OVER CAPACITY
414	Hwy. 111	Adams St.	Dune Palms Rd.	MAJOR	6D	57,000	19,800	41,916	0.74	
415	Hwy. 111	Dune Palms Rd.	Jefferson St.	MAJOR	6D	57,000	19,800	49,911	0.88	NEAR CAPACITY
416	Hwy. 111	Jefferson St.	Madison St.	MAJOR	6D	57,000	20,700	59,551	1.04	OVER CAPACITY
417	Hwy. 111	Madison St.	Monroe St.	MAJOR	6D	57,000	28,000	39,693	0.70	
418	Hwy. 111	Monroe St.	Jackson St.	MAJOR	6D	57,000	25,000	47,640	0.84	NEAR CAPACITY
419	Hwy. 111	Jackson St.	Auto Center Dr.	MAJOR	6D	57,000	13,800	52,444	0.92	NEAR CAPACITY
420	Ave. 48	Washington St.	Adams St.	PRIMARY	4D	38,000	6,300	12,154	0.32	
421	Ave. 48	Adams St.	Dune Palms Rd.	PRIMARY	4D	38,000	6,300	26,587	0.70	
422	Ave. 48	Dune Palms Rd.	Jefferson St.	PRIMARY	4D	38,000	6,300	36,653	0.96	NEAR CAPACITY
423	Ave. 48	Jefferson St.	Madison St.	PRIMARY	4D	38,000	7,600	24,781	0.65	
424	Ave. 48	Madison St.	Monroe St.	PRIMARY	4D	38,000	7,050	29,889	0.79	

APPENDIX C-3

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN HIGH ALTERNATIVE FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
491	Ave. 62	Filmore St.	Pierce St.	PRIMARY	4D	38,000	N/A	14,625	0.38	
492	Ave. 62	Pierce St.	Grapefruit Blvd.	PRIMARY	4D	38,000	N/A	15,686	0.41	
493	Ave. 62	Grapefruit Blvd.	HWY 86 (S)	PRIMARY	4D	38,000	N/A	17,758	0.47	
494	Ave. 62	E. OF HWY 86 (S)		SECONDARY	4U	28,000	N/A	2,000	0.07	
495	Not Used									
496	Ave. 64	Jackson St.	Van Buren St.	COLLECTOR	2U	14,000	N/A	2,000	0.14	
497	Ave. 64	Van Buren St.	Harrison St.	COLLECTOR	2U	14,000	N/A	5,903	0.42	
498	Ave. 64	Harrison St.	Tyler St.	COLLECTOR	2U	14,000	N/A	3,589	0.26	
499	Ave. 64	Tyler St.	Polk St.	COLLECTOR	2U	14,000	N/A	2,385	0.17	
500	Ave. 64	Polk St.	Filmore St.	COLLECTOR	2U	14,000	N/A	2,000	0.14	
501	Ave. 64	Filmore St.	Pierce St.	COLLECTOR	2U	14,000	N/A	2,381	0.17	
502	Ave. 64	Pierce St.	HWY 86 (S)	COLLECTOR	2U	14,000	N/A	2,000	0.14	
503	Ave. 66	Jackson St.	Van Buren St.	SECONDARY	4U	28,000	N/A	2,000	0.07	
504	Ave. 66	Van Buren St.	Harrison St.	SECONDARY	4U	28,000	N/A	2,000	0.07	
505	Ave. 66	Harrison St.	Tyler St.	PRIMARY	4D	38,000	N/A	5,843	0.15	
506	Ave. 66	Tyler St.	Polk St.	PRIMARY	4D	38,000	N/A	6,084	0.16	
507	Ave. 66	Polk St.	Filmore St.	PRIMARY	4D	38,000	N/A	4,584	0.12	
508	Ave. 66	Filmore St.	Pierce St. (W)	PRIMARY	4D	38,000	N/A	6,916	0.18	
509	Ave. 66	Pierce St. (W)	Pierce St. (E)	PRIMARY	4D	38,000	N/A	6,643	0.17	
510	Ave. 66	Pierce St. (E)	HWY 86 (S)	PRIMARY	4D	38,000	N/A	9,333	0.25	
511	Ave. 66	E. OF HWY 86 (S)		COLLECTOR	2U	14,000	N/A	2,459	0.18	
512	I-10	Cook St.	Washington St.	FREEWAY	8D	160,000	47,000	190,603	1.19	OVER CAPACITY
513	I-10	Washington St.	Jefferson St.	FREEWAY	8D	160,000	40,000	163,496	1.02	OVER CAPACITY
514	Not Used									
515	I-10	Jefferson St.	Monroe St.	FREEWAY	8D	160,000	31,500	139,682	0.87	NEAR CAPACITY
516	I-10	Monroe St.	Jackson St.	FREEWAY	8D	160,000	29,000	124,581	0.78	
517	I-10	Jackson St.	Auto Center Dr.	FREEWAY	8D	160,000	28,000	117,964	0.74	
518	I-10	Auto Center Dr.	Hwy. 86	FREEWAY	8D	160,000	25,500	149,908	0.94	NEAR CAPACITY
519	I-10	Hwy. 86	Dillon Rd.	FREEWAY	8D	160,000	16,600	58,457	0.37	
520	I-10	Dillon Rd.	Ave. 50	FREEWAY	8D	160,000	17,200	40,152	0.25	
521	I-10	E. of Ave. 50		FREEWAY	8D	160,000	17,200	28,206	0.18	
522	Hwy. 86	I-10	Dillon Rd.	FREEWAY	8D	160,000	9,600	91,451	0.57	
523	Hwy. 86	Dillon Rd.	Ave. 50	FREEWAY	8D	160,000	6,000	88,442	0.55	

APPENDIX C-3

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN HIGH ALTERNATIVE FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
458	Ave. 54	HWY 86 (S)	Filmore St.	SECONDARY	4U	28,000	100	8,116	0.29	
459	Ave. 54	Filmore St.	Pierce St.	COLLECTOR	2U	14,000	400	2,000	0.14	
460	Airport Blvd.	Madison St.	Monroe St.	PRIMARY	4D	38,000	800	19,799	0.52	
461	Airport Blvd.	Monroe St.	Jackson St.	PRIMARY	4D	38,000	2,300	24,245	0.64	
462	Airport Blvd.	Jackson St.	Van Buren St.	PRIMARY	4D	38,000	2,817	30,503	0.80	
463	Airport Blvd.	Van Buren St.	Harrison St.	PRIMARY	4D	38,000	3,333	23,781	0.63	
464	Airport Blvd.	Harrison St.	Tyler St.	PRIMARY	4D	38,000	3,826	17,836	0.47	
465	Airport Blvd.	Tyler St.	Polk St.	PRIMARY	4D	38,000	3,963	19,733	0.52	
466	Airport Blvd.	Polk St.	Hwy. 111	MAJOR	6D	57,000	4,100	37,293	0.65	
467	Airport Blvd.	Hwy. 111	HWY 86 (S)	MAJOR	6D	57,000	N/A	40,267	0.71	
468	Airport Blvd.	Filmore St.	HWY 86 (S)	PRIMARY	4D	38,000	N/A	16,100	0.42	
469	Airport Blvd.	Filmore St.	Pierce St.	PRIMARY	4D	38,000	N/A	2,004	0.05	
470	Ave. 58	Madison St.	Monroe St.	SECONDARY	4U	28,000	800	8,164	0.29	
471	Ave. 58	Monroe St.	Jackson St.	SECONDARY	4U	28,000	1,100	9,323	0.33	
472	Ave. 58	Jackson St.	Van Buren St.	SECONDARY	4U	28,000	N/A	9,574	0.34	
473	Ave. 58	Van Buren St.	Harrison St.	SECONDARY	4U	28,000	N/A	9,096	0.32	
474	Ave. 58	Polk St.	Filmore St.	COLLECTOR	2U	14,000	N/A	5,486	0.39	
475	Ave. 60	Madison St.	Monroe St.	SECONDARY	4U	28,000	200	11,716	0.42	
476	Ave. 60	Monroe St.	Jackson St.	PRIMARY	4D	38,000	300	9,317	0.25	
477	Ave. 60	Jackson St.	Van Buren St.	PRIMARY	4D	38,000	N/A	9,325	0.25	
478	Ave. 60	Van Buren St.	Harrison St.	PRIMARY	4D	38,000	N/A	18,035	0.47	
479	Ave. 60	Harrison St.	Tyler St.	PRIMARY	4D	38,000	N/A	37,036	0.97	NEAR CAPACITY
480	Ave. 60	Tyler St.	Ave. 62	PRIMARY	4D	38,000	N/A	24,345	0.64	
481	Ave. 60	Polk St.	Filmore St.	COLLECTOR	2U	14,000	N/A	2,000	0.14	
482	Ave. 60	Filmore St.	Grapefruit Blvd.	COLLECTOR	2U	14,000	N/A	4,292	0.31	
483	Ave. 60	E. of Pierce St.		COLLECTOR	2U	14,000	N/A	2,000	0.14	
484	Ave. 62	Madison St.	Monroe St.	SECONDARY	4U	28,000	N/A	19,199	0.69	
485	Ave. 62	Monroe St.	Jackson St.	SECONDARY	4U	28,000	1,100	15,639	0.56	
486	Ave. 62	Jackson St.	Van Buren St.	SECONDARY	4U	28,000	N/A	14,329	0.51	
487	Ave. 62	Van Buren St.	Harrison St.	SECONDARY	4U	28,000	N/A	16,873	0.60	
488	Ave. 62	Harrison St.	Tyler St.	SECONDARY	4U	28,000	N/A	8,636	0.31	
489	Ave. 62	Tyler St.	Ave. 60	SECONDARY	4U	28,000	N/A	7,601	0.27	
490	Ave. 62	Polk St.	Filmore St.	PRIMARY	4D	38,000	N/A	15,426	0.41	

APPENDIX C-4

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN LOW ALTERNATIVE FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
260	Washington St.	N. of Varner Rd.		MAJOR	6D	57,000	7,109	31,780	0.56	
261	Washington St.	I-10 Fwy.	Country Club Dr.	AUG. MAJOR	8D	76,000	24,000	75,548	0.99	NEAR CAPACITY
262	Washington St.	Country Club Dr.	42nd St.	MAJOR	6D	57,000	24,000	51,944	0.91	NEAR CAPACITY
263	Washington St.	42nd St.	Ave. 44	MAJOR	6D	57,000	27,000	54,383	0.95	NEAR CAPACITY
264	Washington St.	Ave. 44	Miles Ave.	MAJOR	6D	57,000	25,250	64,995	1.14	OVER CAPACITY
265	Washington St.	Miles Ave.	Hwy. 111	MAJOR	6D	57,000	23,500	61,413	1.08	OVER CAPACITY
266	Washington St.	Hwy. 111	Ave. 48	AUG. MAJOR	8D	76,000	29,500	62,678	0.82	NEAR CAPACITY
267	Washington St.	Ave. 48	Eisenhower Dr.	AUG. MAJOR	8D	76,000	25,600	53,501	0.70	
268	Washington St.	Eisenhower Dr.	Ave. 50	MAJOR	6D	57,000	21,700	50,422	0.88	NEAR CAPACITY
269	Washington St.	Ave. 50	Calle Tampico	MAJOR	6D	57,000	17,200	33,707	0.59	
270	Washington St.	Calle Tampico	Ave. 52	MAJOR	6D	57,000	17,200	32,249	0.57	
271	Eisenhower Dr.	Washington St.	Ave. 50	SECONDARY	4U	28,000	13,000	14,300	0.51	
272	Eisenhower Dr.	Ave. 50	Calle Tampico	SECONDARY	4U	28,000	14,000	15,400	0.55	
273	Eisenhower Dr.	Calle Tampico	Avenida Bermudas	SECONDARY	4U	28,000	14,000	15,400	0.55	
274	Not Used									
275	Avenida Bermudas	Ave. 52	Eisenhower Dr.	SECONDARY	4U	28,000	11,100	12,210	0.44	
276	Adams St.	Ave. 44	Miles Ave.	SECONDARY	4U	28,000	N/A	4,760	0.17	
277	Adams St.	Miles Ave.	Westward Ho Dr.	SECONDARY	4U	28,000	N/A	10,310	0.37	
278	Adams St.	Westward Ho Dr.	Hwy. 111	SECONDARY	4U	28,000	N/A	10,326	0.37	
279	Adams St.	Hwy. 111	Ave. 48	SECONDARY	4U	28,000	N/A	24,819	0.89	NEAR CAPACITY
280	Dunes Palms Rd.	Ave. 44	Miles Ave.	SECONDARY	4U	28,000	N/A	2,104	0.08	
281	Dunes Palms Rd.	Miles Ave.	Westward Ho Dr.	SECONDARY	4U	28,000	N/A	3,771	0.13	
282	Dunes Palms Rd.	Westward Ho Dr.	Hwy. 111	SECONDARY	4U	28,000	1,400	8,668	0.31	
283	Dunes Palms Rd.	Hwy. 111	Ave. 48	SECONDARY	4U	28,000	900	10,972	0.39	
284	Jefferson St.	40th Ave.	I-10	MAJOR	6D	57,000	1,761	17,120	0.30	
285	Jefferson St.	I-10	Indio Ave.	MAJOR	6D	57,000	6,626	38,526	0.68	
286	Jefferson St.	Indio Ave.	Country Club Dr.	MAJOR	6D	57,000	11,300	40,064	0.70	
287	Jefferson St.	Country Club Dr.	Ave. 44	MAJOR	6D	57,000	13,000	33,766	0.59	
288	Jefferson St.	Ave. 44	Miles Ave.	MAJOR	6D	57,000	13,600	31,942	0.56	
289	Jefferson St.	Miles Ave.	Westward Ho Dr.	MAJOR	6D	57,000	10,800	27,902	0.49	
290	Jefferson St.	Westward Ho Dr.	Hwy. 111	MAJOR	6D	57,000	10,800	28,188	0.49	
291	Jefferson St.	Hwy. 111	Ave. 48	MAJOR	6D	57,000	13,786	28,747	0.50	
292	Jefferson St.	Ave. 48	Ave. 50	MAJOR	6D	57,000	11,700	38,017	0.67	

APPENDIX C-3

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN HIGH ALTERNATIVE FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
524	Hwy. 86	Ave. 50	Ave. 52	FREEWAY	8D	160,000	6,000	67,805	0.42	
525	Not Used									
526	Hwy. 86	Ave. 52	Airport Blvd.	FREEWAY	8D	160,000	6,000	40,710	0.25	
527	Hwy. 86	Airport Blvd.	Ave. 62	FREEWAY	8D	160,000	5,800	40,710	0.25	
528	Hwy. 86	Ave. 62	Ave. 66	FREEWAY	8D	160,000	11,000	28,192	0.18	
529	Hwy. 86	S. of Ave. 66		FREEWAY	8D	160,000	10,400	17,435	0.11	
530	Indio Ave.	Madison St.	Monroe St.	PRIMARY	4D	38,000	N/A	26,127	0.69	
531	Indio Ave.	Monroe St.	Jackson St.	PRIMARY	4D	38,000	N/A	35,001	0.92	NEAR CAPACITY
532	Indio Ave.	Jackson St.	Auto Center Dr.	PRIMARY	4D	38,000	N/A	35,029	0.92	NEAR CAPACITY
533	Hwy. 86/111	Auto Center Dr.	Dillon Rd.	PRIMARY	4D	38,000	26,000	45,695	1.20	OVER CAPACITY
534	Hwy. 111	Dillon Rd.	Ave. 50	MAJOR	6D	57,000	34,500	59,508	1.04	OVER CAPACITY
535	Hwy. 111	Ave. 50	Ave. 52	PRIMARY	4D	38,000	10,900	27,496	0.72	
536	Hwy. 111	Ave. 52	Tyler St.	PRIMARY	4D	38,000	9,000	41,645	1.10	OVER CAPACITY
537	Hwy. 111	Tyler St.	Ave. 54	PRIMARY	4D	38,000	9,000	27,030	0.71	
538	Hwy. 111	Ave. 54	Airport Blvd.	PRIMARY	4D	38,000	9,000	30,348	0.80	
539	Hwy. 111	Airport Blvd.	Filmore St.	PRIMARY	4D	38,000	8,500	45,411	1.20	OVER CAPACITY
540	Grapefruit Blvd.	Filmore St.	Ave. 60	PRIMARY	4D	38,000	6,300	32,811	0.86	NEAR CAPACITY
541	Grapefruit Blvd.	Ave. 60	Pierce	PRIMARY	4D	38,000	6,300	25,820	0.68	
542	Grapefruit Blvd.	Pierce	Ave. 62	PRIMARY	4D	38,000	6,300	19,153	0.50	
543	Grapefruit Blvd.	Ave. 62	Ave. 64	PRIMARY	4D	38,000	6,300	23,754	0.63	
544	Grapefruit Blvd.	S. of Ave. 64		PRIMARY	4D	38,000	5,900	23,210	0.61	
545	Ave. 58	W. of Madison St.		SECONDARY	4U	28,000	N/A	15,047	0.54	

APPENDIX C-4

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN LOW ALTERNATIVE FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
326	Jackson St.	Ave. 52	Ave. 54	PRIMARY	4D	38,000	N/A	13,684	0.36	
327	Jackson St.	Ave. 54	Airport Blvd.	PRIMARY	4D	38,000	1,700	12,316	0.32	
328	Jackson St.	Airport Blvd.	Ave. 58	PRIMARY	4D	38,000	N/A	8,346	0.22	
329	Jackson St.	Ave. 58	Ave. 60	PRIMARY	4D	38,000	1,500	7,877	0.21	
330	Jackson St.	Ave. 60	Ave. 62	SECONDARY	4U	28,000	1,400	4,951	0.18	
331	Jackson St.	Ave. 62	Ave. 64	SECONDARY	4U	28,000	N/A	2,000	0.07	
332	Jackson St.	Ave. 64	Ave. 66	SECONDARY	4U	28,000	N/A	2,000	0.07	
333	Auto Center Dr.	Ave. 44	I-10	SECONDARY	4U	28,000	6,000	8,411	0.30	
334	Auto Center Dr.	I-10	Indio Ave.	PRIMARY	4D	38,000	6,100	40,252	1.06	OVER CAPACITY
335	Van Buren St.	Ave. 48	Ave. 50	PRIMARY	4D	38,000	3,000	29,624	0.78	
336	Van Buren St.	Ave. 50	Ave. 52	PRIMARY	4D	38,000	2,262	24,094	0.63	
337	Van Buren St.	Ave. 52	Ave. 54	PRIMARY	4D	38,000	1,100	23,473	0.62	
338	Van Buren St.	Ave. 54	Airport Blvd.	PRIMARY	4D	38,000	1,400	21,086	0.55	
339	Van Buren St.	Airport Blvd.	Ave. 58	PRIMARY	4D	38,000	1,300	18,218	0.48	
340	Van Buren St.	Ave. 58	Ave. 60	PRIMARY	4D	38,000	N/A	18,963	0.50	
341	Van Buren St.	Ave. 60	Ave. 62	SECONDARY	4U	28,000	N/A	6,927	0.25	
342	Van Buren St.	Ave. 62	Ave. 64	SECONDARY	4U	28,000	N/A	2,834	0.10	
343	Van Buren St.	Ave. 64	Ave. 66	SECONDARY	4U	28,000	N/A	2,000	0.07	
344	Van Buren St.	S. of Ave. 66		COLLECTOR	2U	14,000	N/A	2,000	0.14	
345	Harrison St.	Hwy. 111	Ave. 50	PRIMARY	4D	38,000	26,000	31,674	0.83	NEAR CAPACITY
346	Harrison St.	Ave. 50	Ave. 52	MAJOR	6D	57,000	25,500	39,810	0.70	
347	Harrison St.	Ave. 52	Ave. 54	MAJOR	6D	57,000	15,200	46,394	0.81	NEAR CAPACITY
348	Harrison St.	Ave. 54	Airport Blvd.	MAJOR	6D	57,000	12,000	46,753	0.82	NEAR CAPACITY
349	Harrison St.	Airport Blvd.	Ave. 58	MAJOR	6D	57,000	9,100	48,347	0.85	NEAR CAPACITY
350	Harrison St.	Ave. 58	Ave. 60	MAJOR	6D	57,000	9,100	44,570	0.78	
351	Harrison St.	Ave. 60	Ave. 62	MAJOR	6D	57,000	11,000	33,545	0.59	
352	Harrison St.	Ave. 62	Ave. 64	MAJOR	6D	57,000	11,000	33,732	0.59	
353	Harrison St.	Ave. 64	Ave. 66	PRIMARY	4D	38,000	11,000	31,252	0.82	NEAR CAPACITY
354	Harrison St.	S. of Ave. 66		PRIMARY	4D	38,000	10,400	22,837	0.60	
355	Dillon Rd.	N. of Vista Del Sur		PRIMARY	4D	38,000	3,191	28,222	0.74	
356	Dillon Rd.	Vista Del Sur	Hwy. 86 (S)	PRIMARY	4D	38,000	7,593	33,404	0.88	NEAR CAPACITY
357	Dillon Rd.	Hwy. 86 (S)	Hwy. 111	PRIMARY	4D	38,000	11,602	34,979	0.92	NEAR CAPACITY
358	Vista Del Sur	E. of Dillon		SECONDARY	4U	28,000	N/A	11,850	0.42	

APPENDIX C-4

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN LOW ALTERNATIVE FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
293	Jefferson St.	Ave. 50	Ave. 52	MAJOR	6D	57,000	8,100	18,918	0.33	
294	Jefferson St.	Ave. 52	Ave. 54	MAJOR	6D	57,000	9,200	26,324	0.46	
295	Madison St.	Ave. 42	Indio Ave.	PRIMARY	4D	38,000	N/A	20,229	0.53	
296	Madison St.	Indio Ave.	Fred Waring Dr.	PRIMARY	4D	38,000	573	12,986	0.34	
297	Madison St.	Fred Waring Dr.	Miles Ave.	SECONDARY	4U	28,000	7,782	11,766	0.42	
298	Madison St.	Miles Ave.	Hwy. 111	SECONDARY	4U	28,000	7,782	9,850	0.35	
299	Madison St.	Hwy. 111	Ave. 48	PRIMARY	4D	38,000	6,664	32,062	0.84	NEAR CAPACITY
300	Madison St.	Ave. 48	Ave. 50	PRIMARY	4D	38,000	N/A	25,874	0.68	
301	Madison St.	Ave. 50	Ave. 52	PRIMARY	4D	38,000	464	19,883	0.52	
302	Madison St.	Ave. 52	Ave. 54	PRIMARY	4D	38,000	N/A	20,580	0.54	
303	Madison St.	Ave. 54	Airport Blvd.	MAJOR	6D	57,000	2,309	35,747	0.63	
304	Madison St.	Airport Blvd.	Ave. 58	MAJOR	6D	57,000	1,900	36,712	0.64	
305	Madison St.	Ave. 58	Ave. 60	SECONDARY	4U	28,000	400	13,248	0.47	
306	Not Used									
307	Ave. 62	W. of Madison St.		SECONDARY	4U	28,000	N/A	9,034	0.32	
308	Monroe St.	Ave. 42	I-10	PRIMARY	4D	38,000	11,000	19,052	0.50	
309	Monroe St.	I-10	Indio Ave.	PRIMARY	4D	38,000	N/A	30,722	0.81	NEAR CAPACITY
310	Monroe St.	Indio Ave.	Miles Ave.	PRIMARY	4D	38,000	N/A	31,904	0.84	NEAR CAPACITY
311	Monroe St.	Miles Ave.	Hwy. 111	PRIMARY	4D	38,000	18,400	35,119	0.92	NEAR CAPACITY
312	Monroe St.	Hwy. 111	Ave. 48	PRIMARY	4D	38,000	N/A	20,767	0.55	
313	Monroe St.	Ave. 48	Ave. 50	PRIMARY	4D	38,000	9,000	19,039	0.50	
314	Monroe St.	Ave. 50	Ave. 52	PRIMARY	4D	38,000	4,700	22,233	0.59	
315	Monroe St.	Ave. 52	Ave. 54	PRIMARY	4D	38,000	3,100	15,613	0.41	
316	Monroe St.	Ave. 54	Airport Blvd.	PRIMARY	4D	38,000	2,200	15,471	0.41	
317	Monroe St.	Airport Blvd.	Ave. 58	PRIMARY	4D	38,000	2,200	10,684	0.28	
318	Monroe St.	Ave. 58	Ave. 60	PRIMARY	4D	38,000	1,100	9,250	0.24	
319	Monroe St.	Ave. 60	Ave. 62	SECONDARY	4U	28,000	1,100	8,035	0.29	
320	Jackson St.	Ave. 42	I-10	PRIMARY	4D	38,000	N/A	16,717	0.44	
321	Jackson St.	I-10	Indio Ave.	PRIMARY	4D	38,000	5,400	27,939	0.74	
322	Jackson St.	Indio Ave.	Hwy. 111	PRIMARY	4D	38,000	N/A	35,119	0.92	NEAR CAPACITY
323	Jackson St.	Hwy. 111	Ave. 48	PRIMARY	4D	38,000	9,500	20,767	0.55	
324	Jackson St.	Ave. 48	Ave. 50	PRIMARY	4D	38,000	7,200	7,920	0.21	
325	Jackson St.	Ave. 50	Ave. 52	PRIMARY	4D	38,000	5,900	6,490	0.17	

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN LOW ALTERNATIVE FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
392	Hovley Ln.	Oasis Club Dr.	Washington St.	PRIMARY	4D	38,000	N/A	29,844	0.79	
393	42nd Ave.	Washington St.	Country Club Dr.	PRIMARY	4D	38,000	9,300	19,830	0.52	
394	Fred Waring Dr.	Oasis Club Dr.	Washington St.	MAJOR	6D	57,000	20,876	54,826	0.96	NEAR CAPACITY
395	Fred Waring Dr.	Washington St.	Adams St.	PRIMARY	4D	38,000	17,500	31,412	0.83	NEAR CAPACITY
396	Fred Waring Dr.	Adams St.	Dune Palms Rd.	PRIMARY	4D	38,000	14,350	32,221	0.85	NEAR CAPACITY
397	Fred Waring Dr.	Dune Palms Rd.	Jefferson St.	PRIMARY	4D	38,000	11,200	30,569	0.80	
398	Fred Waring Dr.	Jefferson St.	Madison St.	PRIMARY	4D	38,000	12,522	27,061	0.71	
399	Fred Waring Dr.	Madison St.	Monroe St.	PRIMARY	4D	38,000	7,900	19,935	0.52	
400	Avenue 50	E. of Filmore	I-10	MAJOR	6D	57,000	N/A	22,833	0.40	
401	Miles Ave.	Hwy. 111	Washington St.	PRIMARY	4D	38,000	3,800	11,236	0.30	
402	Miles Ave.	Washington St.	Adams St.	PRIMARY	4D	38,000	6,600	17,814	0.47	
403	Miles Ave.	Adams St.	Dune Palms Rd.	PRIMARY	4D	38,000	6,700	12,209	0.32	
404	Miles Ave.	Dune Palms Rd.	Jefferson St.	PRIMARY	4D	38,000	6,800	15,571	0.41	
405	Miles Ave.	Jefferson St.	Madison St.	SECONDARY	4U	28,000	11,500	14,394	0.51	
406	Miles Ave.	Madison St.	Monroe St.	SECONDARY	4U	28,000	10,500	15,683	0.56	
407	Miles Ave.	Monroe St.	Jackson St.	SECONDARY	4U	28,000	4,457	4,903	0.18	
408	Westward Ho Dr.	Adams St.	Dune Palms Rd.	COLLECTOR	2U	14,000	N/A	3,236	0.23	
409	Westward Ho Dr.	Dune Palms Rd.	Jefferson St.	COLLECTOR	2U	14,000	N/A	2,261	0.16	
410	Westward Ho Dr.	E. of Jefferson St.		COLLECTOR	2U	14,000	N/A	2,000	0.14	
411	Hwy. 111	El Dorado Dr.	Miles Ave.	AUG. MAJOR	8D	76,000	29,000	69,641	0.92	NEAR CAPACITY
412	Hwy. 111	Miles Ave.	Washington St.	AUG. MAJOR	8D	76,000	31,076	59,356	0.78	
413	Hwy. 111	Washington St.	Adams St.	MAJOR	6D	57,000	23,300	57,733	1.01	OVER CAPACITY
414	Hwy. 111	Adams St.	Dune Palms Rd.	MAJOR	6D	57,000	19,800	40,168	0.70	
415	Hwy. 111	Dune Palms Rd.	Jefferson St.	MAJOR	6D	57,000	19,800	45,951	0.81	NEAR CAPACITY
416	Hwy. 111	Jefferson St.	Madison St.	MAJOR	6D	57,000	20,700	55,217	0.97	NEAR CAPACITY
417	Hwy. 111	Madison St.	Monroe St.	MAJOR	6D	57,000	28,000	36,803	0.65	
418	Hwy. 111	Monroe St.	Jackson St.	MAJOR	6D	57,000	25,000	46,522	0.82	NEAR CAPACITY
419	Hwy. 111	Jackson St.	Auto Center Dr.	MAJOR	6D	57,000	13,800	51,332	0.90	NEAR CAPACITY
420	Ave. 48	Washington St.	Adams St.	PRIMARY	4D	38,000	6,300	9,871	0.26	
421	Ave. 48	Adams St.	Dune Palms Rd.	PRIMARY	4D	38,000	6,300	20,260	0.53	
422	Ave. 48	Dune Palms Rd.	Jefferson St.	PRIMARY	4D	38,000	6,300	28,244	0.74	
423	Ave. 48	Jefferson St.	Madison St.	PRIMARY	4D	38,000	7,600	19,732	0.52	
424	Ave. 48	Madison St.	Monroe St.	PRIMARY	4D	38,000	7,050	25,950	0.68	

APPENDIX C-4

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN LOW ALTERNATIVE FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
359	Tyler St.	Vista Del Sur	Ave. 50	SECONDARY	4U	28,000	N/A	15,223	0.54	
360	Tyler St.	Ave. 50	Ave. 52	COLLECTOR	2U	14,000	N/A	9,292	0.66	
361	Dillon Rd.	I-10	Vista Del Sur	PRIMARY	4D	38,000	N/A	35,150	0.93	NEAR CAPACITY
362	Tyler St.	Grapefruit Blvd.	Ave. 54	PRIMARY	4D	38,000	1,100	12,248	0.32	
363	Tyler St.	Ave. 54	Airport Blvd.	PRIMARY	4D	38,000	N/A	8,480	0.22	
364	Tyler St.	Ave. 60	Ave. 62	COLLECTOR	2U	14,000	N/A	3,869	0.28	
365	Tyler St.	Ave. 62	Ave. 64	COLLECTOR	2U	14,000	N/A	3,817	0.27	
366	Tyler St.	Ave. 64	Ave. 66	COLLECTOR	2U	14,000	N/A	2,000	0.14	
367	Polk St.	Airport Blvd.	Ave. 58	SECONDARY	4U	28,000	1,600	14,700	0.53	
368	Polk St.	Ave. 58	Ave. 60	SECONDARY	4U	28,000	N/A	12,961	0.46	
369	Polk St.	Ave. 60	Ave. 62	SECONDARY	4U	28,000	N/A	9,367	0.33	
370	Polk St.	Ave. 62	Ave. 64	SECONDARY	4U	28,000	N/A	5,622	0.20	
371	Polk St.	Ave. 64	Ave. 66	SECONDARY	4U	28,000	N/A	3,632	0.13	
372	Avenue 50	SR-86 (S)	Vista Del Sur	MAJOR	6D	57,000	N/A	57,511	1.01	OVER CAPACITY
373	Filmore St.	Ave. 58	Ave. 60	COLLECTOR	2U	14,000	N/A	2,000	0.14	
374	Filmore St.	Ave. 60	Ave. 62	COLLECTOR	2U	14,000	N/A	2,000	0.14	
375	Filmore St.	Ave. 62	Ave. 64	COLLECTOR	2U	14,000	N/A	2,000	0.14	
376	Filmore St.	Ave. 64	Ave. 66	COLLECTOR	2U	14,000	N/A	2,000	0.14	
377	Filmore St.	Ave. 50	Ave. 52	SECONDARY	4U	28,000	N/A	16,906	0.60	
378	Filmore St.	Ave. 52	Ave. 54	SECONDARY	4U	28,000	N/A	10,871	0.39	
379	Filmore St.	Ave. 54	Airport Blvd.	SECONDARY	4U	28,000	N/A	13,348	0.48	
380	Ave. 50	N. of I-10		PRIMARY	4D	38,000	N/A	9,186	0.24	
381	Ave. 50	E. of Filmore	Filmore St.	MAJOR	6D	57,000	N/A	44,386	0.78	
382	Pierce St.	Ave. 52	Ave. 54	SECONDARY	4U	28,000	200	2,000	0.07	
383	Pierce St.	Ave. 54	Airport Blvd.	SECONDARY	4U	28,000	N/A	2,000	0.07	
384	Pierce St.	Airport Blvd.	Ave. 60	COLLECTOR	2U	14,000	N/A	2,000	0.14	
385	Pierce St.	Grapefruit Blvd.	Ave. 62	SECONDARY	4U	28,000	2,400	2,640	0.09	
386	Pierce St.	Ave. 62	Ave. 64	SECONDARY	4U	28,000	N/A	2,000	0.07	
387	Pierce St.	Ave. 64	Ave. 66	SECONDARY	4U	28,000	N/A	2,000	0.07	
388	Pierce St.	S. of Ave. 66		SECONDARY	4U	28,000	N/A	3,003	0.11	
389	Country Club Dr.	Oasis Club Dr.	Washington St.	PRIMARY	4D	38,000	17,741	38,455	1.01	OVER CAPACITY
390	Country Club Dr.	Washington St.	42nd Ave.	PRIMARY	4D	38,000	7,000	11,871	0.31	
391	Country Club Dr.	42nd Ave.	Jefferson St.	PRIMARY	4D	38,000	12,200	31,482	0.83	NEAR CAPACITY

APPENDIX C-4

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN LOW ALTERNATIVE FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
458	Ave. 54	HWY 86 (S)	Filmore St.	SECONDARY	4U	28,000	100	7,241	0.26	
459	Ave. 54	Filmore St.	Pierce St.	COLLECTOR	2U	14,000	400	2,000	0.14	
460	Airport Blvd.	Madison St.	Monroe St.	PRIMARY	4D	38,000	800	15,705	0.41	
461	Airport Blvd.	Monroe St.	Jackson St.	PRIMARY	4D	38,000	2,300	14,229	0.37	
462	Airport Blvd.	Jackson St.	Van Buren St.	PRIMARY	4D	38,000	2,817	24,639	0.65	
463	Airport Blvd.	Van Buren St.	Harrison St.	PRIMARY	4D	38,000	3,333	22,111	0.58	
464	Airport Blvd.	Harrison St.	Tyler St.	PRIMARY	4D	38,000	3,826	14,530	0.38	
465	Airport Blvd.	Tyler St.	Polk St.	PRIMARY	4D	38,000	3,963	18,110	0.48	
466	Airport Blvd.	Polk St.	Hwy. 111	MAJOR	6D	57,000	4,100	31,234	0.55	
467	Airport Blvd.	Hwy. 111	HWY 86 (S)	MAJOR	6D	57,000	N/A	36,477	0.64	
468	Airport Blvd.	HWY 86 (S)	Filmore St.	PRIMARY	4D	38,000	N/A	15,501	0.41	
469	Airport Blvd.	Filmore St.	Pierce St.	PRIMARY	4D	38,000	N/A	2,000	0.05	
470	Ave. 58	Madison St.	Monroe St.	SECONDARY	4U	28,000	800	6,552	0.23	
471	Ave. 58	Monroe St.	Jackson St.	SECONDARY	4U	28,000	1,100	7,490	0.27	
472	Ave. 58	Jackson St.	Van Buren St.	SECONDARY	4U	28,000	N/A	7,386	0.26	
473	Ave. 58	Van Buren St.	Harrison St.	SECONDARY	4U	28,000	N/A	4,763	0.17	
474	Ave. 58	Polk St.	Filmore St.	COLLECTOR	2U	14,000	N/A	2,000	0.14	
475	Ave. 60	Madison St.	Monroe St.	SECONDARY	4U	28,000	200	6,999	0.25	
476	Ave. 60	Monroe St.	Jackson St.	PRIMARY	4D	38,000	300	6,876	0.18	
477	Ave. 60	Jackson St.	Van Buren St.	PRIMARY	4D	38,000	N/A	5,972	0.16	
478	Ave. 60	Van Buren St.	Harrison St.	PRIMARY	4D	38,000	N/A	13,450	0.35	
479	Ave. 60	Harrison St.	Tyler St.	PRIMARY	4D	38,000	N/A	31,460	0.83	NEAR CAPACITY
480	Ave. 60	Tyler St.	Ave. 62	PRIMARY	4D	38,000	N/A	16,695	0.44	
481	Ave. 60	Polk St.	Filmore St.	COLLECTOR	2U	14,000	N/A	2,000	0.14	
482	Ave. 60	Filmore St.	Grapefruit Blvd.	COLLECTOR	2U	14,000	N/A	2,246	0.16	
483	Ave. 60	E. of Pierce St.		COLLECTOR	2U	14,000	N/A	2,000	0.14	
484	Ave. 62	Madison St.	Monroe St.	SECONDARY	4U	28,000	N/A	13,784	0.49	
485	Ave. 62	Monroe St.	Jackson St.	SECONDARY	4U	28,000	1,100	10,315	0.37	
486	Ave. 62	Jackson St.	Van Buren St.	SECONDARY	4U	28,000	N/A	9,228	0.33	
487	Ave. 62	Van Buren St.	Harrison St.	SECONDARY	4U	28,000	N/A	9,155	0.33	
488	Ave. 62	Harrison St.	Tyler St.	SECONDARY	4U	28,000	N/A	4,987	0.18	
489	Ave. 62	Tyler St.	Ave. 60	SECONDARY	4U	28,000	N/A	3,940	0.14	
490	Ave. 62	Polk St.	Filmore St.	PRIMARY	4D	38,000	N/A	8,945	0.24	

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LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN LOW ALTERNATIVE FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
425	Ave. 48	Monroe St.	Jackson St.	PRIMARY	4D	38,000	6,500	24,187	0.64	
426	Ave. 48	Jackson St.	Van Buren St.	PRIMARY	4D	38,000	5,400	21,920	0.58	
427	Ave. 48	Van Buren St.	Hwy. 111	PRIMARY	4D	38,000	3,800	31,811	0.84	NEAR CAPACITY
428	Ave. 50	Eisenhower Dr.	Washington St.	PRIMARY	4D	38,000	3,900	26,556	0.70	
429	Ave. 50	Washington St.	Jefferson St.	PRIMARY	4D	38,000	7,837	23,606	0.62	
430	Ave. 50	Jefferson St.	Madison St.	PRIMARY	4D	38,000	5,885	17,074	0.45	
431	Ave. 50	Madison St.	Monroe St.	PRIMARY	4D	38,000	3,300	22,207	0.58	
432	Ave. 50	Monroe St.	Jackson St.	PRIMARY	4D	38,000	9,400	22,355	0.59	
433	Ave. 50	Jackson St.	Van Buren St.	PRIMARY	4D	38,000	5,412	22,031	0.58	
434	Ave. 50	Van Buren St.	Harrison St.	PRIMARY	4D	38,000	9,800	24,469	0.64	
435	Ave. 50	Grapefruit Blvd.	Tyler St.	MAJOR	6D	57,000	4,600	31,950	0.56	
436	Ave. 50	Tyler St.	HWY 86 (S)	MAJOR	6D	57,000	4,600	37,443	0.66	
437	Ave. 50	HWY 86 (S)	Filmore St.	MAJOR	6D	57,000	N/A	55,203	0.97	NEAR CAPACITY
438	Calle Tampico	W. of Washington St.		COLLECTOR	2U	14,000	N/A	5,978	0.43	
439	Ave. 52	Washington St.	Jefferson St.	PRIMARY	4D	38,000	8,545	25,627	0.67	
440	Ave. 52	Jefferson St.	Madison St.	PRIMARY	4D	38,000	4,847	18,080	0.48	
441	Ave. 52	Madison St.	Monroe St.	PRIMARY	4D	38,000	3,700	16,480	0.43	
442	Ave. 52	Monroe St.	Jackson St.	PRIMARY	4D	38,000	3,700	22,887	0.60	
443	Ave. 52	Jackson St.	Van Buren St.	PRIMARY	4D	38,000	5,500	16,407	0.43	
444	Ave. 52	Van Buren St.	Harrison St.	PRIMARY	4D	38,000	6,255	15,481	0.41	
445	Ave. 52	Harrison St.	Hwy. 111	PRIMARY	4D	38,000	9,943	18,081	0.48	
446	Ave. 52	Hwy. 111	Tyler St.	MAJOR	6D	57,000	8,600	27,689	0.49	
447	Ave. 52	Tyler St.	HWY 86 (S)	MAJOR	6D	57,000	N/A	20,774	0.36	
448	Ave. 52	HWY 86 (S)	Filmore St.	PRIMARY	4D	38,000	600	17,972	0.47	
449	Ave. 52	Filmore St.	Pierce St.	PRIMARY	4D	38,000	600	2,000	0.05	
450	Ave. 54	Jefferson St.	Madison St.	PRIMARY	4D	38,000	2,800	15,126	0.40	
451	Ave. 54	Madison St.	Monroe St.	SECONDARY	4U	28,000	600	2,000	0.07	
452	Ave. 54	Monroe St.	Jackson St.	SECONDARY	4U	28,000	800	2,000	0.07	
453	Ave. 54	Jackson St.	Van Buren St.	SECONDARY	4U	28,000	1,077	2,000	0.07	
454	Ave. 54	Van Buren St.	Harrison St.	SECONDARY	4U	28,000	1,353	3,554	0.13	
455	Ave. 54	Harrison St.	Tyler St.	SECONDARY	4U	28,000	1,800	8,378	0.30	
456	Ave. 54	Tyler St.	Hwy. 111	SECONDARY	4U	28,000	855	7,718	0.28	
457	Ave. 54	Hwy. 111	HWY 86 (S)	SECONDARY	4U	28,000	619	11,087	0.40	

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LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN LOW ALTERNATIVE FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
524	Hwy. 86	Ave. 50	Ave. 52	FREEWAY	8D	160,000	6,000	58,694	0.37	
525	Not Used									
526	Hwy. 86	Ave. 52	Airport Blvd.	FREEWAY	8D	160,000	6,000	30,432	0.19	
527	Hwy. 86	Airport Blvd.	Ave. 62	FREEWAY	8D	160,000	5,800	30,432	0.19	
528	Hwy. 86	Ave. 62	Ave. 66	FREEWAY	8D	160,000	11,000	23,019	0.14	
529	Hwy. 86	S. of Ave. 66		FREEWAY	8D	160,000	10,400	17,225	0.11	
530	Indio Ave.	Madison St.	Monroe St.	PRIMARY	4D	38,000	N/A	24,397	0.64	
531	Indio Ave.	Monroe St.	Jackson St.	PRIMARY	4D	38,000	N/A	33,399	0.88	NEAR CAPACITY
532	Indio Ave.	Jackson St.	Auto Center Dr.	PRIMARY	4D	38,000	N/A	33,423	0.88	NEAR CAPACITY
533	Hwy. 86/111	Auto Center Dr.	Dillon Rd.	PRIMARY	4D	38,000	26,000	44,267	1.16	OVER CAPACITY
534	Hwy. 111	Dillon Rd.	Ave. 50	MAJOR	6D	57,000	34,500	54,845	0.96	NEAR CAPACITY
535	Hwy. 111	Ave. 50	Ave. 52	PRIMARY	4D	38,000	10,900	24,990	0.66	
536	Hwy. 111	Ave. 52	Tyler St.	PRIMARY	4D	38,000	9,000	37,577	0.99	NEAR CAPACITY
537	Hwy. 111	Tyler St.	Ave. 54	PRIMARY	4D	38,000	9,000	23,234	0.61	
538	Hwy. 111	Ave. 54	Airport Blvd.	PRIMARY	4D	38,000	9,000	24,963	0.66	
539	Hwy. 111	Airport Blvd.	Filmore St.	PRIMARY	4D	38,000	8,500	40,898	1.08	OVER CAPACITY
540	Grapefruit Blvd.	Filmore St.	Ave. 60	PRIMARY	4D	38,000	6,300	25,995	0.68	
541	Grapefruit Blvd.	Ave. 60	Pierce	PRIMARY	4D	38,000	6,300	18,528	0.49	
542	Grapefruit Blvd.	Pierce	Ave. 62	PRIMARY	4D	38,000	6,300	16,317	0.43	
543	Grapefruit Blvd.	Ave. 62	Ave. 64	PRIMARY	4D	38,000	6,300	21,640	0.57	
544	Grapefruit Blvd.	S. of Ave. 64		PRIMARY	4D	38,000	5,900	21,581	0.57	
545	Ave. 58	W. of Madison St.		SECONDARY	4U	28,000	N/A	13,415	0.48	

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APPENDIX C-4

LA QUINTA TRAFFIC MODEL POST 2020 GENERAL PLAN LOW ALTERNATIVE FUTURE FORECAST

Segment ID	Roadway	From	To	ROADWAY CLASSIFICATION	NUMBER OF LANES	CAPACITY	EXISTING (1998) ADT COUNTS	REFINED 2020 FUTURE FORECAST	VOLUME TO CAPACITY RATIO	COMMENTS
491	Ave. 62	Filmore St.	Pierce St.	PRIMARY	4D	38,000	N/A	7,849	0.21	
492	Ave. 62	Pierce St.	Grapefruit Blvd.	PRIMARY	4D	38,000	N/A	7,720	0.20	
493	Ave. 62	Grapefruit Blvd.	HWY 86 (S)	PRIMARY	4D	38,000	N/A	12,065	0.32	
494	Ave. 62	E. OF HWY 86 (S)		SECONDARY	4U	28,000	N/A	2,000	0.07	
495	Not Used									
496	Ave. 64	Jackson St.	Van Buren St.	COLLECTOR	2U	14,000	N/A	2,000	0.14	
497	Ave. 64	Van Buren St.	Harrison St.	COLLECTOR	2U	14,000	N/A	2,196	0.16	
498	Ave. 64	Harrison St.	Tyler St.	COLLECTOR	2U	14,000	N/A	2,229	0.16	
499	Ave. 64	Tyler St.	Polk St.	COLLECTOR	2U	14,000	N/A	2,000	0.14	
500	Ave. 64	Polk St.	Filmore St.	COLLECTOR	2U	14,000	N/A	2,000	0.14	
501	Ave. 64	Filmore St.	Pierce St.	COLLECTOR	2U	14,000	N/A	2,000	0.14	
502	Ave. 64	Pierce St.	HWY 86 (S)	COLLECTOR	2U	14,000	N/A	2,000	0.14	
503	Ave. 66	Jackson St.	Van Buren St.	SECONDARY	4U	28,000	N/A	2,000	0.07	
504	Ave. 66	Van Buren St.	Harrison St.	SECONDARY	4U	28,000	N/A	2,000	0.07	
505	Ave. 66	Harrison St.	Tyler St.	PRIMARY	4D	38,000	N/A	4,925	0.13	
506	Ave. 66	Tyler St.	Polk St.	PRIMARY	4D	38,000	N/A	5,076	0.13	
507	Ave. 66	Polk St.	Filmore St.	PRIMARY	4D	38,000	N/A	3,155	0.08	
508	Ave. 66	Filmore St.	Pierce St. (W)	PRIMARY	4D	38,000	N/A	4,090	0.11	
509	Ave. 66	Pierce St. (W)	Pierce St. (E)	PRIMARY	4D	38,000	N/A	3,639	0.10	
510	Ave. 66	Pierce St. (E)	HWY 86 (S)	PRIMARY	4D	38,000	N/A	4,613	0.12	
511	Ave. 66	E. OF HWY 86 (S)		COLLECTOR	2U	14,000	N/A	2,376	0.17	
512	I-10	Cook St.	Washington St.	FREEWAY	8D	160,000	47,000	185,403	1.16	OVER CAPACITY
513	I-10	Washington St.	Jefferson St.	FREEWAY	8D	160,000	40,000	157,216	0.98	NEAR CAPACITY
514	Not Used									
515	I-10	Jefferson St.	Monroe St.	FREEWAY	8D	160,000	31,500	136,437	0.85	NEAR CAPACITY
516	I-10	Monroe St.	Jackson St.	FREEWAY	8D	160,000	29,000	121,790	0.76	
517	I-10	Jackson St.	Auto Center Dr.	FREEWAY	8D	160,000	28,000	117,572	0.73	
518	I-10	Auto Center Dr.	Hwy. 86	FREEWAY	8D	160,000	25,500	148,395	0.93	NEAR CAPACITY
519	I-10	Hwy. 86	Dillon Rd.	FREEWAY	8D	160,000	16,600	58,737	0.37	
520	I-10	Dillon Rd.	Ave. 50	FREEWAY	8D	160,000	17,200	39,235	0.25	
521	I-10	E. of Ave. 50		FREEWAY	8D	160,000	17,200	27,667	0.17	
522	Hwy. 86	I-10	Dillon Rd.	FREEWAY	8D	160,000	9,600	89,658	0.56	
523	Hwy. 86	Dillon Rd.	Ave. 50	FREEWAY	8D	160,000	6,000	83,313	0.52	

The Ranch
Existing
AM Peak Hour

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #3 Jefferson St. (NS) / SR-111 (EW)

Cycle (sec): 67 Critical Vol./Cap. (X): 0.387
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 22.8
Optimal Cycle: 67 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	20	20	10	20	20	10	15	15	10	15	15
Lanes:	1	0	1	0	1	0	1	0	2	0	1	0
Volume Module:												
Base Vol:	107	182	51	122	191	51	18	302	68	53	522	89
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Sse:	107	182	51	122	191	51	18	302	68	53	522	89
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	107	182	51	122	191	51	18	302	68	53	522	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	107	182	51	122	191	51	18	302	68	53	522	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	107	182	51	122	191	51	18	302	68	53	522	89
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.95	0.85	0.95	0.95	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat:	1805	1900	1615	1805	1900	1615	1805	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.06	0.10	0.03	0.07	0.10	0.03	0.01	0.08	0.04	0.03	0.14	0.06
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.15	0.30	0.30	0.15	0.30	0.30	0.15	0.22	0.22	0.15	0.22	0.22
Volume/Cap:	0.40	0.32	0.11	0.45	0.34	0.11	0.07	0.37	0.19	0.20	0.65	0.25
Delay/Veh:	26.7	18.6	17.1	27.2	18.7	17.1	24.6	22.3	21.3	25.3	25.4	21.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.7	18.6	17.1	27.2	18.7	17.1	24.6	22.3	21.3	25.3	25.4	21.7
DesignQueue:	3	5	1	4	5	1	1	9	2	2	16	3

APPENDIX D

POST 2020 GENERAL PLAN RECOMMENDED ALTERNATIVE INTERSECTION ANALYSIS WORKSHEETS

The Ranch
Existing
PM Peak Hour

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #3 Jefferson St. (NS) / SR-111 (EW)

Cycle (sec): 67 Critical Vol./Cap. (X): 0.492
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 27.7
Optimal Cycle: 67 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 20 20	10 20 20	10 15 15	10 15 15
Lanes:	1 0 1 0 1	1 0 1 0 1	1 0 2 0 1	1 0 2 0 1

Volume Module:

Base Vol:	95 178 90	108 190 69	60 712 102	97 615 99
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	95 178 90	108 190 69	60 712 102	97 615 99
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	95 178 90	108 190 69	60 712 102	97 615 99
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	95 178 90	108 190 69	60 712 102	97 615 99
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol.:	95 178 90	108 190 69	60 712 102	97 615 99

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 1.00 0.85	0.95 1.00 0.85	0.95 0.95 0.85	0.95 0.95 0.85
Lanes:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 2.00 1.00	1.00 2.00 1.00
Final Sat.:	1805 1900 1615	1805 1900 1615	1805 3610 1615	1805 3610 1615

Capacity Analysis Module:

Vol/Sat:	0.05 0.09 0.06	0.06 0.10 0.04	0.03 0.20 0.06	0.05 0.17 0.06
Crit Moves:	****	****	****	****
Green/Cycle:	0.15 0.30 0.30	0.15 0.30 0.30	0.15 0.22 0.22	0.15 0.22 0.22
Volume/Cap:	0.35 0.31 0.19	0.40 0.34 0.14	0.22 0.68 0.28	0.36 0.76 0.27
Delay/Veh:	26.4 18.5 17.6	26.8 18.7 17.4	25.5 36.2 22.0	26.4 28.6 21.9
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	26.4 18.5 17.6	26.8 18.7 17.4	25.5 36.2 22.0	26.4 28.6 21.9
DesignQueue:	3 5 2	3 5 2	2 22 3	3 19 3

The Ranch
Existing
AM Peak Hour

Level Of Service Computation Report
1997 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #4 Jefferson St. (NS) / Ave. 50 (EW)

Cycle (sec): 0 Critical Vol./Cap. (X): 0.473
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 11.5
Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0
Lanes:	0 1 0 0 1	0 1 0 0 1	0 1 0 0 1	0 1 0 0 1

Volume Module:

Base Vol:	19 189 16	33 245 94	50 95 35	6 102 80
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	19 189 16	33 245 94	50 95 35	6 102 80
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	19 189 16	33 245 94	50 95 35	6 102 80
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	19 189 16	33 245 94	50 95 35	6 102 80
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol.:	19 189 16	33 245 94	50 95 35	6 102 80

Saturation Flow Module:

Lanes:	0.09 0.91 1.00	0.12 0.88 1.00	0.34 0.66 1.00	0.06 0.94 1.00
Final Sat.:	52 513 634	70 518 665	178 319 588	29 497 588

Capacity Analysis Module:

Vol/Sat:	0.37 0.37 0.03	0.47 0.47 0.14	0.28 0.28 0.06	0.21 0.21 0.14
Crit Moves:	****	****	****	****
Delay/Veh:	12.1 12.1 8.2	13.6 13.6 8.7	11.6 11.6 8.7	10.6 10.6 9.2
Delay Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	12.1 12.1 8.2	13.6 13.6 8.7	11.6 11.6 8.7	10.6 10.6 9.2
LOS by Move:	B B A	B B A	B B A	B B A
ApproachDel:	11.8	12.3	11.0	10.0
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	11.8	12.3	11.0	10.0
LOS by Appr:	B	B	B	B

The Ranch
Existing
PM Peak Hour

Level Of Service Computation Report
1997 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #4 Jefferson St. (NS) / Ave. 50 (EW)

Cycle (sec): 0 Critical Vol./Cap. (X): 0.466
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 12.7
Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0
Lanes:	0 1 0 0 1	0 1 0 0 1	0 1 0 0 1	0 1 0 0 1

Volume Module:

Base Vol:	30	222	8	70	191	107	84	123	19	16	108	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	30	222	8	70	191	107	84	123	19	16	108	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	30	222	8	70	191	107	84	123	19	16	108	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	30	222	8	70	191	107	84	123	19	16	108	30
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	30	222	8	70	191	107	84	123	19	16	108	30

Saturation Flow Module:

Lanes:	0.12	0.88	1.00	0.27	0.73	1.00	0.41	0.59	1.00	0.13	0.87	1.00
Final Sat:	66	487	618	150	410	639	207	304	582	65	436	558

Capacity Analysis Module:

Vol/Sat:	0.46	0.46	0.01	0.47	0.47	0.17	0.41	0.41	0.03	0.25	0.25	0.05
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Delay/Veh:	13.7	13.7	8.3	13.9	13.9	9.1	13.5	13.5	8.6	11.4	11.4	8.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.7	13.7	8.3	13.9	13.9	9.1	13.5	13.5	8.6	11.4	11.4	8.9
LOS by Move:	B	B	A	B	B	A	B	B	A	B	B	A
ApproachDel:	13.6			12.5			13.1			10.9		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	13.6			12.5			13.1			10.9		
LOS by Appr:	B			B			B			B		

The Ranch
Existing
AM Peak Hour

Level Of Service Computation Report
1997 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #5 Jefferson St. (NS) / Ave. 52 (EW)

Cycle (sec): 0 Critical Vol./Cap. (X): 0.476
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 11.4
Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0
Lanes:	1 0 0 1 0	1 0 2 0 1	1 0 0 1 0	1 0 1 1 0

Volume Module:

Base Vol:	69	114	9	35	214	47	78	166	116	4	107	55
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	69	114	9	35	214	47	78	166	116	4	107	55
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	69	114	9	35	214	47	78	166	116	4	107	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	69	114	9	35	214	47	78	166	116	4	107	55
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	69	114	9	35	214	47	78	166	116	4	107	55

Saturation Flow Module:

Lanes:	1.00	0.93	0.07	1.00	2.00	1.00	1.00	0.59	0.41	1.00	1.32	0.68
Final Sat:	490	492	39	480	1033	572	520	348	243	460	663	358

Capacity Analysis Module:

Vol/Sat:	0.14	0.23	0.23	0.07	0.21	0.08	0.15	0.48	0.48	0.01	0.16	0.15
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Delay/Veh:	10.7	10.8	10.8	10.3	10.9	9.1	10.5	13.4	13.4	10.1	10.7	10.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.7	10.8	10.8	10.3	10.9	9.1	10.5	13.4	13.4	10.1	10.7	10.2
LOS by Move:	B	B	B	B	B	A	B	B	B	B	B	B
ApproachDel:	10.8			10.6			12.8			10.5		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	10.8			10.6			12.8			10.5		
LOS by Appr:	B			B			B			B		

The Ranch
Existing
PM Peak Hour

Level Of Service Computation Report
1997 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #5 Jefferson St. (NS) / Ave. 52 (EW)

Cycle (sec): 0 Critical Vol./Cap. (X): 0.307
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 10.4
Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0
Lanes:	1 0 0 1 0	1 0 2 0 1	1 0 0 1 0	1 0 1 1 0

Volume Module:

Base Vol:	104	164	1	56	91	74	54	118	62	4	132	28
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	104	164	1	56	91	74	54	118	62	4	132	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	104	164	1	56	91	74	54	118	62	4	132	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	104	164	1	56	91	74	54	118	62	4	132	28
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	104	164	1	56	91	74	54	118	62	4	132	28

Saturation Flow Module:

Lanes:	1.00	0.99	0.01	1.00	2.00	1.00	1.00	0.66	0.34	1.00	1.65	0.35
Final Sat:	534	576	4	498	1068	597	520	384	202	483	869	188

Capacity Analysis Module:

Vol/Sat:	0.19	0.28	0.28	0.11	0.09	0.12	0.10	0.31	0.31	0.01	0.15	0.15
Crit Moves:	***	***	***	***	***	***	***	***	***	***	***	***
Delay/Veh:	10.6	10.8	10.8	10.4	9.6	9.1	10.0	10.9	10.9	9.8	10.2	10.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.6	10.8	10.8	10.4	9.6	9.1	10.0	10.9	10.9	9.8	10.2	10.0
LOS by Move:	B	B	B	B	A	A	A	B	B	A	B	A
ApproachDel:	10.7			9.7			10.7			10.1		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	10.7			9.7			10.7			10.1		
LOS by Appr:	B			A			B			B		

The Ranch
Existing
AM Peak Hour

Level Of Service Computation Report
1997 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #7 Jefferson St. (NS) / Ave. 54 (EW)

Cycle (sec): 0 Critical Vol./Cap. (X): 0.362
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.6
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0
Lanes:	1 0 1 0 1	0 0 1 0 0	1 0 0 1 0	1 0 0 1 0

Volume Module:

Base Vol:	1	124	15	126	125	6	1	4	1	21	8	65
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	124	15	126	125	6	1	4	1	21	8	65
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	1	124	15	126	125	6	1	4	1	21	8	65
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1	124	15	126	125	6	1	4	1	21	8	65
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	1	124	15	126	125	6	1	4	1	21	8	65

Saturation Flow Module:

Lanes:	1.00	1.00	1.00	0.49	0.49	0.02	1.00	0.80	0.20	1.00	0.11	0.89
Final Sat:	646	710	824	348	346	17	557	494	124	573	77	622

Capacity Analysis Module:

Vol/Sat:	0.00	0.17	0.02	0.36	0.36	0.36	0.00	0.01	0.01	0.04	0.10	0.10
Crit Moves:	***	***	***	***	***	***	***	***	***	***	***	***
Delay/Veh:	8.2	8.7	7.0	10.7	10.7	10.7	8.8	8.2	8.2	8.9	8.1	8.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.2	8.7	7.0	10.7	10.7	10.7	8.8	8.2	8.2	8.9	8.1	8.1
LOS by Move:	A	A	A	B	B	B	A	A	A	A	A	A
ApproachDel:	8.5			10.7			8.3			8.2		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	8.5			10.7			8.3			8.2		
LOS by Appr:	A			B			A			A		

The Ranch
Existing
PM Peak Hour

Level Of Service Computation Report
1997 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #7 Jefferson St. (NS) / Ave. 54 (EW)

Cycle (sec): 0 Critical Vol./Cap. (X): 0.238
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 8.8
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	0	1	0	0	1	0	0	1

Volume Module:

Base Vol:	3	149	21	47	121	2	2	1	1	10	1	77
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	149	21	47	121	2	2	1	1	10	1	77
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	149	21	47	121	2	2	1	1	10	1	77
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	149	21	47	121	2	2	1	1	10	1	77
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	3	149	21	47	121	2	2	1	1	10	1	77

Saturation Flow Module:

Lanes:	1.00	1.00	1.00	0.28	0.71	0.01	1.00	0.50	0.50	1.00	0.01	0.99
Final Sat.:	566	729	848	197	508	8	577	334	334	591	9	726

Capacity Analysis Module:

Vol/Sat:	0.00	0.20	0.02	0.24	0.24	0.24	0.00	0.00	0.00	0.02	0.11	0.11
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Delay/Veh:	8.1	8.8	7.0	9.5	9.5	9.5	8.6	7.8	7.8	8.6	7.8	7.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.1	8.8	7.0	9.5	9.5	9.5	8.6	7.8	7.8	8.6	7.8	7.8
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	8.5			9.5			8.2			7.9		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	8.5			9.5			8.2			7.9		
LOS by Appr:	A			A			A			A		

Tentative Tract Map No. 29323

Existing
AM Peak Hour

Level Of Service Computation Report

1994 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #2 Jefferson St. (NS) / Country Club Dr. (EW)

Cycle (sec): 1 Critical Vol./Cap. (X): 0.774
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 12.0
Optimal Cycle: 0 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	1	0	0	1	0	0	0	1	0	0

Volume Module:

Base Vol:	368	269	0	0	208	238	175	0	250	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	368	269	0	0	208	238	175	0	250	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	368	269	0	0	208	238	175	0	250	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	368	269	0	0	208	238	175	0	250	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	368	269	0	0	208	238	175	0	250	0	0	0

Saturation Flow Module:

Sat/Lane:	495	495	495	336	336	336	323	323	323	0	0	0
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	495	495	0	0	336	336	323	0	323	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.74	0.54	0.00	0.00	0.62	0.71	0.54	0.00	0.77	0.00	0.00	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
ApproachV/S:	0.64			0.66			0.66			xxxxxx		

Level Of Service Module:

Delay/Veh:	16.9	7.9	0.0	0.0	10.5	14.8	7.8	0.0	18.9	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.9	7.9	0.0	0.0	10.5	14.8	7.8	0.0	18.9	0.0	0.0	0.0
LOS by Move:	C	B	*	*	C	C	B	*	C	*	*	*
ApproachDel:	11.5			12.5			12.2			xxxxxx		
LOS by Appr:	C			C			C			F		

Tentative Tract Map No. 29323
Existing
PM Peak Hour

Level Of Service Computation Report
1994 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #2 Jefferson St. (NS) / Country Club Dr. (EW)

Cycle (sec): 1 Critical Vol./Cap. (X): 0.819
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 15.0
Optimal Cycle: 0 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	0	0	0	0	1	0	0	0	0	0

Volume Module:

Base Vol:	198	194	0	0	203	174	337	0	305	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	198	194	0	0	203	174	337	0	305	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	198	194	0	0	203	174	337	0	305	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	198	194	0	0	203	174	337	0	305	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	198	194	0	0	203	174	337	0	305	0	0	0

Saturation Flow Module:

Sat/Lane:	371	371	371	248	248	248	423	423	423	0	0	0
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	371	371	0	0	248	248	423	0	423	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.53	0.52	0.00	0.00	0.82	0.70	0.80	0.00	0.72	0.00	0.00	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
ApproachV/S:	0.53	0.76	0.76	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx

Level Of Service Module:

Delay/Veh:	7.6	7.3	0.0	0.0	22.4	14.4	20.6	0.0	15.5	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	7.6	7.3	0.0	0.0	22.4	14.4	20.6	0.0	15.5	0.0	0.0	0.0
LOS by Move:	B	B	*	*	D	C	D	*	C	*	*	*
ApproachDel:	7.4	18.0	17.9	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
LOS by Appr:	B	C	C	F	F	F	F	F	F	F	F	F

Tentative Tract Map No. 29323
Existing
AM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #4 Jefferson St. (NS) / Fred Waring Dr. (EW)

Cycle (sec): 67 Critical Vol./Cap. (X): 0.472
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 14.5
Optimal Cycle: 67 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	20	20	10	20	20	10	15	15	10	15	15
Lanes:	1	0	1	0	1	0	1	0	2	0	1	0

Volume Module:

Base Vol:	94	359	42	55	248	116	143	258	102	64	320	121
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	94	359	42	55	248	116	143	258	102	64	320	121
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	94	359	42	55	248	116	143	258	102	64	320	121
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	94	359	42	55	248	116	143	258	102	64	320	121
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	94	359	42	55	248	116	143	271	102	64	336	121

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1805	1900	1615	1805	1900	1615	1805	3800	1615	1805	3800	1615

Capacity Analysis Module:

Vol/Sat:	0.05	0.19	0.03	0.03	0.13	0.07	0.06	0.07	0.06	0.04	0.09	0.07
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.15	0.30	0.30	0.15	0.30	0.30	0.15	0.22	0.22	0.15	0.22	0.22
Volume/Cap:	0.35	0.63	0.09	0.20	0.44	0.24	0.53	0.32	0.28	0.24	0.39	0.33

Level Of Service Module:

Delay/Veh:	16.9	14.8	10.9	16.2	12.6	11.5	18.6	14.1	14.0	16.3	14.5	14.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.9	14.8	10.9	16.2	12.6	11.5	18.6	14.1	14.0	16.3	14.5	14.3
Queue:	2	6	1	1	4	2	3	4	2	1	5	2

Tentative Tract Map No. 29323
Existing
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #4 Jefferson St. (NS) / Fred Waring Dr. (EW)

Cycle (sec): 67 Critical Vol./Cap. (X): 0.458
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 14.6
Optimal Cycle: 67 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	20	20	10	20	20	10	15	15	10	15	15
Lanes:	1	0	1	0	1	0	1	0	2	0	1	0

Volume Module:

Base Vol:	98	290	60	74	400	98	51	292	152	31	245	63
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	98	290	60	74	400	98	51	292	152	31	245	63
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	98	290	60	74	400	98	51	292	152	31	245	63
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	98	290	60	74	400	98	51	292	152	31	245	63
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Final Vol.:	98	290	60	74	400	98	51	307	152	31	257	63

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1805	1900	1615	1805	1900	1615	1805	3800	1615	1805	3800	1615

Capacity Analysis Module:

Vol/Sat:	0.05	0.15	0.04	0.04	0.21	0.06	0.03	0.08	0.09	0.02	0.07	0.04
Crit Moves:	****			****			****		****			
Green/Cycle:	0.15	0.30	0.30	0.15	0.30	0.30	0.15	0.22	0.22	0.15	0.22	0.22
Volume/Cap:	0.36	0.51	0.12	0.27	0.71	0.20	0.19	0.36	0.42	0.12	0.30	0.17

Level Of Service Module:

Delay/Veh:	16.9	13.2	11.1	16.5	16.2	11.4	16.2	14.3	14.9	15.9	14.0	13.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.9	13.2	11.1	16.5	16.2	11.4	16.2	14.3	14.9	15.9	14.0	13.6
Queue:	2	5	1	1	7	1	1	5	2	1	4	1

Tentative Tract Map No. 29323
Existing
AM Peak Hour

Level Of Service Computation Report
1994 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #5 Jefferson St. (NS) / Miles Ave. (EW)

Cycle (sec): 1 Critical Vol./Cap. (X): 1.077
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 14.7
Optimal Cycle: 0 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	1	0	0	1	0	0	1	0	1	0	0

Volume Module:

Base Vol:	13	223	47	148	257	22	36	105	21	61	194	247
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	223	47	148	257	22	36	105	21	61	194	247
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	13	223	47	148	257	22	36	105	21	61	194	247
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	13	223	47	148	257	22	36	105	21	61	194	247
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	13	223	47	148	257	22	36	105	21	61	194	247

Saturation Flow Module:

Sat/Lane:	304	304	304	376	376	376	298	298	298	284	284	284
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.06	0.94	1.00	0.37	0.63	1.00	0.26	0.74	1.00	0.24	0.76	1.00
Final Sat.:	17	287	304	137	239	376	76	222	298	68	216	284

Capacity Analysis Module:

Vol/Sat:	0.78	0.78	0.15	1.08	1.08	0.06	0.47	0.47	0.07	0.90	0.90	0.87
Crit Moves:	****			****			****		****			
ApproachV/S:	0.47			0.57			0.27			0.88		

Level Of Service Module:

Delay/Veh:	19.1	19.1	1.8	59.9	59.9	1.2	6.0	6.0	1.3	30.3	30.3	27.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.1	19.1	1.8	59.9	59.9	1.2	6.0	6.0	1.3	30.3	30.3	27.2
LOS by Move:	C	C	A	F	F	A	B	B	A	E	E	D
ApproachDel:	5.9			8.7			2.8			28.7		
LOS by Appr:	B			B			A			D		

Tentative Tract Map No. 29323
Existing
PM Peak Hour

Level Of Service Computation Report
1994 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #5 Jefferson St. (NS) / Miles Ave. (EW)

Cycle (sec): 1 Critical Vol./Cap. (X): 1.412
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 15.4
Optimal Cycle: 0 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Lanes:	0 1 0 0 1	0 1 0 0 1	0 1 0 0 1	0 1 0 0 1

Volume Module:	North Bound	South Bound	East Bound	West Bound
Base Vol:	20 254 50	250 302 60	34 222 35	40 197 176
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	20 254 50	250 302 60	34 222 35	40 197 176
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	20 254 50	250 302 60	34 222 35	40 197 176
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	20 254 50	250 302 60	34 222 35	40 197 176
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol.:	20 254 50	250 302 60	34 222 35	40 197 176

Saturation Flow Module:	North Bound	South Bound	East Bound	West Bound
Sat/Lane:	307 307 307	391 391 391	279 279 279	257 257 257
Adjustment:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Lanes:	0.07 0.93 1.00	0.45 0.55 1.00	0.13 0.87 1.00	0.17 0.83 1.00
Final Sat.:	22 285 307	177 214 391	37 242 279	43 214 257

Capacity Analysis Module:	North Bound	South Bound	East Bound	West Bound
Vol/Sat:	0.89 0.89 0.16	1.41 1.41 0.15	0.92 0.92 0.13	0.92 0.92 0.68
Crit Moves:	****	****	****	****
ApproachV/S:	0.53	0.78	0.52	0.80

Level Of Service Module:	North Bound	South Bound	East Bound	West Bound
Delay/Veh:	29.7 29.7	1.9 213.7 214	1.8 32.7 32.7	1.6 33.3 33.3
Delay Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	29.7 29.7	1.9 213.7 214	1.8 32.7 32.7	1.6 33.3 33.3
LOS by Move:	D D A	F F A	E E A	E E C
ApproachDel:	7.4	19.6	7.3	21.2
LOS by Appr:	B	C	B	D

The Ranch
Existing
AM Peak Hour

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 Madison St. (NS) / Ave. 50 (EW)

Average Delay (sec/veh): 9.2 Worst Case Level Of Service: A

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	0 0 1 0 0	0 0 0 0 0	0 0 0 1 0	0 1 0 0 0

Volume Module:	North Bound	South Bound	East Bound	West Bound
Base Vol:	1 0 3	0 0 0	0 0 122	4 1 145
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	1 0 3	0 0 0	0 0 122	4 1 145
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	1 0 3	0 0 0	0 0 122	4 1 145
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Final Vol.:	1 0 3	0 0 0	0 0 122	4 1 145

Critical Gap Module:	North Bound	South Bound	East Bound	West Bound
Critical Gap:	6.4 xxxxx	6.2 xxxxx	xxxxx xxxxx	4.1 xxxxx
FollowUpTim:	3.5 xxxxx	3.3 xxxxx	xxxxx xxxxx	2.2 xxxxx

Capacity Module:	North Bound	South Bound	East Bound	West Bound
Cnflct Vol:	271 xxxxx	124 xxxxx	xxxxx xxxxx	126 xxxxx
Potent Cap.:	723 xxxxx	932 xxxxx	xxxxx xxxxx	1473 xxxxx
Move Cap.:	722 xxxxx	932 xxxxx	xxxxx xxxxx	1473 xxxxx

Level Of Service Module:	North Bound	South Bound	East Bound	West Bound
Stopped Del:	xxxxx xxxxx	xxxxx xxxxx	xxxxx xxxxx	7.4 xxxxx
LOS by Move:	A	A	A	A
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx 869 xxxxx	xxxxx xxxxx	xxxxx xxxxx	xxxxx xxxxx
Shrd StpDel:	xxxxx 9.2 xxxxx	xxxxx xxxxx	xxxxx xxxxx	7.4 xxxxx
Shared LOS:	A	A	A	A
ApproachDel:	9.2	xxxxxx	xxxxxx	xxxxxx
ApproachLOS:	A	A	A	A

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Level of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

The Ranch
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PM Peak Hour

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 Madison St. (NS) / Ave. 52 (EW)

Average Delay (sec/veh): 10.0 Worst Case Level Of Service: A

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	0 0 0 0	0 0 1 0 0	0 1 0 0 0	0 0 0 1 0

Volume Module:	North Bound	South Bound	East Bound	West Bound
Base Vol:	0 0 0	5 0 1	2 139 0	0 149 5
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	0 0 0	5 0 1	2 139 0	0 149 5
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	0 0 0	5 0 1	2 139 0	0 149 5
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Final Vol:	0 0 0	5 0 1	2 139 0	0 149 5

Critical Gap Module:	North Bound	South Bound	East Bound	West Bound
Critical Gap:	xxxxx xxxx xxxxx	6.4 xxxx 6.2	4.1 xxxx xxxxx	xxxxx xxxx xxxxx
FollowUpTime:	xxxxx xxxx xxxxx	3.5 xxxx 3.3	2.2 xxxx xxxxx	xxxxx xxxx xxxxx

Capacity Module:	North Bound	South Bound	East Bound	West Bound
Cnflct Vol:	xxxx xxxx xxxxx	295 xxxx 152	154 xxxx xxxxx	xxxx xxxx xxxxx
Potent Cap:	xxxx xxxx xxxxx	701 xxxx 900	1439 xxxx xxxxx	xxxx xxxx xxxxx
Move Cap:	xxxx xxxx xxxxx	700 xxxx 900	1439 xxxx xxxxx	xxxx xxxx xxxxx

Level Of Service Module:	North Bound	South Bound	East Bound	West Bound
Stopped Del:	xxxxx xxxx xxxxx	xxxxx xxxx xxxxx	7.5 xxxx xxxxx	xxxxx xxxx xxxxx
LOS by Move:	A	A	A	A
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap:	xxxx xxxx xxxxx	xxxx 727 xxxxx	xxxx xxxx xxxxx	xxxx xxxx xxxxx
Shrd StpDel:	xxxxx xxxx xxxxx	xxxxx 10.0 xxxxx	7.5 xxxx xxxxx	xxxxx xxxx xxxxx
Shared LOS:	A	A	A	A
ApproachDel:	xxxxxx	10.0	xxxxxx	xxxxxx
ApproachLOS:	A	A	A	A

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Level Of Service Computation Report
1997 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #12 Monroe St. (NS) / Ave. 52 (EW)

Cycle (sec): 0 Critical Vol./Cap. (X): 0.301
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.3
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Lanes:	0 0 1 0 0	0 0 1 0 0	0 0 1 0 0	0 0 1 0 0

Volume Module:	North Bound	South Bound	East Bound	West Bound
Base Vol:	0 44 3	41 124 13	75 126 13	4 110 37
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	0 44 3	41 124 13	75 126 13	4 110 37
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	0 44 3	41 124 13	75 126 13	4 110 37
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	0 44 3	41 124 13	75 126 13	4 110 37
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	0 44 3	41 124 13	75 126 13	4 110 37

Saturation Flow Module:	North Bound	South Bound	East Bound	West Bound
Lanes:	0.08 0.89 0.03	0.22 0.68 0.10	0.35 0.59 0.06	0.03 0.73 0.24
Final Sat.:	57 593 19	156 471 68	249 419 43	19 522 176

Capacity Analysis Module:	North Bound	South Bound	East Bound	West Bound
Vol/Sat:	0.16 0.16 0.16	0.26 0.26 0.26	0.30 0.30 0.30	0.21 0.21 0.21
Crit Moves:	A	A	A	A
Delay/Veh:	8.9 8.9 8.9	9.5 9.5 9.5	9.7 9.7 9.7	8.9 8.9 8.9
Delay Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	8.9 8.9 8.9	9.5 9.5 9.5	9.7 9.7 9.7	8.9 8.9 8.9
LOS by Move:	A	A	A	A
ApproachDel:	8.9	9.5	9.7	8.9
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	8.9	9.5	9.7	8.9
LOS by Appr:	A	A	A	A

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Level Of Service Computation Report
1997 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #12 Monroe St. (NS) / Ave. 52 (EW)

Cycle (sec): 0 Critical Vol./Cap. (X): 0.276
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.1
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Lanes:	0 0 1 0 0	0 0 1 0 0	0 0 1 0 0	0 0 1 0 0

Volume Module:

Base Vol:	17 123	2 68 92	40	39 97	17	4 101	33
Growth Adj:	1.00 1.00	1.00 1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
Initial Bse:	17 123	2 68 92	40	39 97	17	4 101	33
User Adj:	1.00 1.00	1.00 1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
PHF Adj:	1.00 1.00	1.00 1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
PHF Vol:	17 123	2 68 92	40	39 97	17	4 101	33
Reduced Vol:	0 0 0	0 0 0	0	0 0 0	0	0 0 0	0
Reduced Vol:	17 123	2 68 92	40	39 97	17	4 101	33
PCE Adj:	1.00 1.00	1.00 1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
MLF Adj:	1.00 1.00	1.00 1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
Final Vol:	17 123	2 68 92	40	39 97	17	4 101	33

Saturation Flow Module:

Lanes:	0.12 0.87	0.01	0.34 0.46	0.20	0.25 0.64	0.11	0.03 0.73	0.24
Final Sat.:	84 606	10	247 334	145	177 441	77	20 518	169

Capacity Analysis Module:

Vol/Sat:	0.20 0.20	0.20	0.28 0.28	0.28	0.22 0.22	0.22	0.20 0.20	0.20
Crit Moves:	9.0 9.0	9.0	9.4 9.4	9.4	9.1 9.1	9.1	8.8 8.8	8.8
Delay/Veh:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
AdjDel/Veh:	9.0 9.0	9.0	9.4 9.4	9.4	9.1 9.1	9.1	8.8 8.8	8.8
LOS by Move:	A A	A	A A	A	A A	A	A A	A
ApproachDel:	9.0		9.4		9.1		8.8	
Delay Adj:	1.00		1.00		1.00		1.00	
ApprAdjDel:	9.0		9.4		9.1		8.8	
LOS by Appr:	A		A		A		A	

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Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 Monroe St. (NS) / Ave. 54 (EW)

Average Delay (sec/veh): 10.4 Worst Case Level Of Service: B

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Lanes:	0 0 1 0 0	0 0 1 0 0	0 0 1 0 0	0 0 1 0 0

Volume Module:

Base Vol:	2 88	3 14 119	16	14 11	6	2 18	14
Growth Adj:	1.00 1.00	1.00 1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
Initial Bse:	2 88	3 14 119	16	14 11	6	2 18	14
User Adj:	1.00 1.00	1.00 1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
PHF Adj:	1.00 1.00	1.00 1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
PHF Vol:	2 88	3 14 119	16	14 11	6	2 18	14
Reduced Vol:	0 0 0	0 0 0	0	0 0 0	0	0 0 0	0
Final Vol:	2 88	3 14 119	16	14 11	6	2 18	14

Critical Gap Module:

Critical Gap:	4.1 xxxx xxxxx	4.1 xxxx xxxxx	7.1 6.5	6.2	7.1 6.5	6.2
FollowUpTime:	2.2 xxxx xxxxx	2.2 xxxx xxxxx	1.5 4.0	3.3	3.5 4.0	3.3

Capacity Module:

Conflict Vol:	135 xxxx xxxxx	91 xxxx xxxxx	265 250	127	257 257	89
Potent Cap.:	1462 xxxx xxxxx	1517 xxxx xxxxx	692 656	929	700 651	974
Move Cap.:	1462 xxxx xxxxx	1517 xxxx xxxxx	662 649	929	681 644	974

Level Of Service Module:

Stopped Del:	7.5 xxxx xxxxx	7.4 xxxx xxxxx	xxxxx xxxx xxxxx	xxxxx xxxx xxxxx	xxxxx xxxx xxxxx
LOS by Move:	A	A	B	B	B
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx xxxx xxxxx	xxxx xxxx xxxxx	xxxx 896 xxxxx	xxxx 751 xxxxx	xxxx 751 xxxxx
3rd StpDel:	xxxx xxxx xxxxx	xxxx xxxx xxxxx	xxxx 10.4 xxxxx	xxxx 10.0 xxxxx	xxxx 10.0 xxxxx
Shared LOS:	B	B	B	B	B
ApproachDel:	xxxxxx	xxxxxx	10.4	10.0	10.0
ApproachLOS:	B	B	H	B	B

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Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 Monroe St. (NS) / Ave. 54 (EW)

Average Delay (sec/veh): 10.3 Worst Case Level Of Service: B

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 1 0 0 0 0 1 0 0 0 0 1 0 0 0

Volume Module:
Base Vol: 1 88 3 26 87 7 10 15 5 3 14 8
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1 88 3 26 87 7 10 15 5 3 14 8
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 1 88 3 26 87 7 10 15 5 3 14 8
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol: 1 88 3 26 87 7 10 15 5 3 14 8

Critical Gap Module:
Critical Gp: 4.1 xxxx xxxx 4.1 xxxx xxxx 7.1 6.5 6.2 7.1 6.5 6.2
FollowUpTim: 2.2 xxxx xxxx 2.2 xxxx xxxx 3.5 4.0 3.3 3.5 4.0 3.3

Capacity Module:
Conflict Vol: 94 xxxx xxxx 91 xxxx xxxx 245 236 91 244 238 89
Potent Cap.: 1513 xxxx xxxx 1517 xxxx xxxx 713 669 973 714 667 974
Move Cap.: 1513 xxxx xxxx 1517 xxxx xxxx 686 657 973 688 655 974

Level Of Service Module:
Stopped Del: 7.4 xxxx xxxx 7.4 xxxx xxxx xxxx xxxx xxxx xxxx xxxx
LOS by Move: A A A A A A A A A A A A A A A A
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxx xxxx xxxx xxxx 705 xxxx 736 xxxx
Chrd StpDel: xxxx xxxx xxxx xxxx xxxx xxxx 10.3 xxxx 10.1 xxxx
Shared LOS: B B B B B B B B B B B B B B B B
ApproachDel: xxxxxx xxxxxx 10.3 10.1
ApproachLOS: B B

Walgreens
Existing
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Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #1 Eisenhower Dr. (NS) / Ave. 50 (EW)

Cycle (sec): 82 Critical Vol./Cap. (X): 0.244

Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 26.6

Optimal Cycle: 82 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 10 20 20 10 20 20 20 20 20 20 20 20
Lanes: 1 0 2 0 1 1 0 2 0 1 0 1 0 1 0 1

Volume Module:
Base Vol: 24 480 49 40 287 20 12 30 50 51 11 43
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 24 480 49 40 287 20 12 30 50 51 11 43
Added Vol: 0 0 0 1 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 24 480 49 41 287 20 12 31 50 51 12 44
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 24 480 49 41 287 20 12 31 50 51 12 44
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 24 480 49 41 287 20 12 31 50 51 12 44
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol: 24 480 49 41 287 20 12 31 50 51 12 44

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 0.85 0.95 0.95 0.85 0.94 0.94 0.81 0.95 1.00 0.85
Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 0.28 0.72 1.00 1.00 1.00 1.00
Final Sat: 1805 3610 1615 1805 3610 1615 497 1283 1534 1805 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.01 0.13 0.03 0.02 0.08 0.01 0.02 0.02 0.03 0.03 0.01 0.03
Crit Moves: ****
Green/Cycle: 0.12 0.24 0.24 0.12 0.24 0.24 0.24 0.24 0.24 0.24 0.24 0.24
Volume/Cap: 0.11 0.55 0.12 0.19 0.33 0.05 0.10 0.10 0.13 0.12 0.03 0.11
Delay/Veh: 32.3 27.7 24.3 32.8 25.7 23.8 24.1 24.1 24.3 24.2 23.6 24.2
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 32.3 27.7 24.3 32.8 25.7 23.8 24.1 24.1 24.3 24.2 23.6 24.2
DesignQueue: 1 17 2 2 10 1 0 1 2 2 0 2

Walgreens
Existing
PM Peak Hour

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #1 Eisenhower Dr. (NS) / Ave. 50 (EW)

Cycle (sec): 82 Critical Vol./Cap. (X): 0.341
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 28.1
Optimal Cycle: 82 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 10 20 20 10 20 20 20 20 20 20 20 20
Lanes: 1 0 2 0 1 1 0 2 0 1 0 1 0 1 0 1

Volume Module:

Base Vol: 24 308 45 46 518 32 44 21 29 140 33 34
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 24 308 45 46 518 32 44 21 29 140 33 34
Added Vol: 0 0 0 4 0 0 0 4 0 0 4 4
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 24 308 45 50 518 32 44 25 29 140 37 38
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 24 308 45 50 518 32 44 25 29 140 37 38
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 24 308 45 50 518 32 44 25 29 140 37 38
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol: 24 308 45 50 518 32 44 25 29 140 37 38

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 0.85 0.95 0.95 0.85 0.90 0.87 0.87 0.95 1.00 0.85
Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 0.88 0.52 0.60 1.00 1.00 1.00
Final Sat.: 1805 3610 1615 1805 3610 1615 1512 859 996 1805 1900 1615

Capacity Analysis Module:

Vol/Sat: 0.01 0.09 0.03 0.03 0.17 0.02 0.03 0.03 0.03 0.08 0.02 0.02
Crit Moves: ****
Green/Cycle: 0.12 0.24 0.24 0.12 0.24 0.24 0.24 0.24 0.24 0.24 0.24 0.24
Volume/Cap: 0.11 0.35 0.11 0.23 0.70 0.08 0.12 0.12 0.12 0.32 0.08 0.10
Delay/Veh: 32.3 25.9 24.2 33.0 30.8 24.0 24.2 24.2 24.2 25.8 24.0 24.1
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 32.3 25.9 24.2 33.0 30.8 24.0 24.2 24.2 24.2 25.8 24.0 24.1
DesignQueue: 1 11 2 2 22 1 2 1 1 5 1 1

Walgreens
Existing
AM Peak Hour

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #3 Washington St. (NS) / Calle Tampico (EW)

Cycle (sec): 77 Critical Vol./Cap. (X): 0.355
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 24.2
Optimal Cycle: 77 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 10 20 20 10 20 25 10 25 25
Lanes: 1 0 2 0 1 1 0 2 0 1 1 0 1 0 1 0

Volume Module:

Base Vol: 20 216 153 44 316 94 140 156 26 67 138 47
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 20 216 153 44 316 94 140 156 26 67 138 47
Added Vol: 0 5 0 1 3 1 1 0 0 0 0 1
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 20 221 153 45 319 95 141 156 26 67 138 48
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 20 221 153 45 319 95 141 156 26 67 138 48
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 20 221 153 45 319 95 141 156 26 67 138 48
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol: 20 221 153 45 319 95 141 156 26 67 138 48

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.95 0.85 0.95 0.95 0.85 0.95 1.00 0.85 0.95 0.96 0.96
Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 1.00 1.00 1.00 0.74 0.26
Final Sat.: 1805 3610 1615 1805 3610 1615 1805 1900 1615 1805 1355 471

Capacity Analysis Module:

Vol/Sat: 0.01 0.06 0.09 0.02 0.09 0.06 0.08 0.08 0.02 0.04 0.10 0.10
Crit Moves: ****
Green/Cycle: 0.13 0.26 0.26 0.13 0.26 0.26 0.13 0.32 0.32 0.13 0.32 0.32
Volume/Cap: 0.09 0.24 0.36 0.19 0.34 0.23 0.60 0.25 0.05 0.29 0.31 0.31
Delay/Veh: 29.6 22.6 23.8 30.3 23.4 22.7 35.9 19.3 17.9 30.9 19.9 19.9
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 29.6 22.6 23.8 30.3 23.4 22.7 35.9 19.3 17.9 30.9 19.9 19.9
DesignQueue: 1 7 5 2 10 3 5 5 1 3 4 1

Walgreens
Existing
PM Peak Hour

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #3 Washington St. (NS) / Calle Tampico (EW)

Cycle (sec): 77 Critical Vol./Cap. (X): 0.387
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 27.1
Optimal Cycle: 77 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	20	20	10	20	20	10	25	25	10	25	25
Lanes:	1	0	2	0	1	1	1	0	1	1	0	1

Volume Module:

Base Vol:	65	350	48	37	348	211	183	52	53	50	79	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	65	350	48	37	348	211	183	52	53	50	79	16
Added Vol:	0	15	0	4	16	4	4	0	0	0	0	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	65	365	48	41	364	215	187	52	53	50	79	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	65	365	48	41	364	215	187	52	53	50	79	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	65	365	48	41	364	215	187	52	53	50	79	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	65	365	48	41	364	215	187	52	53	50	79	20

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	0.97	0.97
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	0.80	0.20
Final Sat:	1805	3610	1615	1805	3610	1615	1805	1900	1615	1805	1471	372

Capacity Analysis Module:

Vol/Sat:	0.04	0.10	0.03	0.02	0.10	0.13	0.10	0.03	0.03	0.03	0.05	0.05
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.13	0.26	0.26	0.13	0.26	0.26	0.13	0.32	0.32	0.13	0.32	0.32
Volume/Cap:	0.28	0.39	0.11	0.17	0.39	0.51	0.80	0.08	0.10	0.21	0.17	0.17
Delay/Veh:	30.9	23.7	21.9	30.2	23.7	25.4	49.8	18.1	18.2	30.4	18.7	18.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.9	23.7	21.9	30.2	23.7	25.4	49.8	18.1	18.2	30.4	18.7	18.7
DesignQueue:	2	12	2	2	12	7	7	2	2	2	2	1

The Ranch
Existing
AM Peak Hour

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #1 Washington St. (NS) / Ave. 50 (EW)

Cycle (sec): 120 Critical Vol./Cap. (X): 0.701
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 34.0
Optimal Cycle: 120 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	20	20	10	20	20	10	20	20	10	20	20
Lanes:	1	0	1	1	0	1	1	0	1	1	0	1

Volume Module:

Base Vol:	21	803	38	172	801	78	43	71	25	53	122	179
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	21	803	38	172	801	78	43	71	25	53	122	179
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	21	803	38	172	801	78	43	71	25	53	122	179
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	21	803	38	172	801	78	43	71	25	53	122	179
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	21	803	38	172	801	78	43	71	25	53	122	179

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.91	0.91
Lanes:	1.00	1.91	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.41	0.59
Final Sat:	1805	3423	162	1805	1900	1615	1805	1900	1615	1805	702	1029

Capacity Analysis Module:

Vol/Sat:	0.01	0.23	0.23	0.10	0.42	0.05	0.02	0.04	0.02	0.03	0.17	0.17
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.08	0.43	0.43	0.17	0.52	0.52	0.08	0.20	0.20	0.10	0.21	0.21
Volume/Cap:	0.14	0.55	0.55	0.55	0.81	0.09	0.29	0.19	0.08	0.30	0.81	0.81
Delay/Veh:	51.4	26.0	26.0	47.3	29.2	14.6	52.7	40.3	39.3	51.1	57.6	57.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.4	26.0	26.0	47.3	29.2	14.6	52.7	40.3	39.3	51.1	57.6	57.6
DesignQueue:	1	32	2	10	29	3	3	4	1	3	7	10

The Ranch
Existing
PM Peak Hour

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #1 Washington St. (NS) / Ave. 50 (EW)

Cycle (sec): 110 Critical Vol./Cap. (X): 0.544
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 37.3
Optimal Cycle: 110 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 20 20	10 20 20	10 20 20	10 20 20
Lanes:	1 0 1 1 0	1 0 1 0 1	1 0 1 0 1	1 0 0 1 0

Volume Module:

Base Vol:	27 559 30	165 632 106	47 62 33	73 53 135
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	27 559 30	165 632 106	47 62 33	73 53 135
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	27 559 30	165 632 106	47 62 33	73 53 135
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	27 559 30	165 632 106	47 62 33	73 53 135
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	27 559 30	165 632 106	47 62 33	73 53 135

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.94 0.94	0.95 1.00 0.85	0.95 1.00 0.85	0.95 0.89 0.89
Lanes:	1.00 1.90 0.10	1.00 1.00 1.00	1.00 1.00 1.00	1.00 0.28 0.72
Final Sat:	1805 3399 182	1805 1900 1615	1805 1900 1615	1805 478 1217

Capacity Analysis Module:

Vol/Sat:	0.01 0.16 0.16	0.09 0.33 0.07	0.03 0.03 0.02	0.04 0.11 0.11
Crit Moves:	****	****	****	****
Green/Cycle:	0.09 0.18 0.18	0.44 0.53 0.53	0.09 0.18 0.18	0.09 0.18 0.18
Volume/Cap:	0.16 0.90 0.90	0.21 0.63 0.12	0.29 0.18 0.11	0.44 0.61 0.61
Delay/Veh:	46.6 60.2 60.2	19.4 19.7 13.2	47.6 38.3 37.8	49.3 45.0 45.0
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	46.6 60.2 60.2	19.4 19.7 13.2	47.6 38.3 37.8	49.3 45.0 45.0
DesignQueue:	2 29 2	6 20 3	3 3 2	4 3 7

The Ranch
Existing
AM Peak Hour

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #2 Washington St. (NS) / Ave. 52 (EW)

Cycle (sec): 87 Critical Vol./Cap. (X): 0.286
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 33.0
Optimal Cycle: 87 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Split Phase	Split Phase	Protected	Protected
Rights:	Include	Ovl	Include	Include
Min. Green:	20 20 20	20 20 20	10 25 25	10 25 25
Lanes:	0 0 1 0 0	1 1 0 0 1	2 0 2 0 1	1 0 2 0 1

Volume Module:

Base Vol:	1 2	218 9	76 340 252	5 3 93 135
Growth Adj:	1.00 1.00	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00 1.00
Initial Bse:	1 2	218 9	76 340 252	5 3 93 135
User Adj:	1.00 1.00	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00 1.00
PHF Adj:	1.00 1.00	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00 1.00
PHF Volume:	1 2	218 9	76 340 252	5 3 93 135
Reduct Vol:	0 0	0 0	0 0 0	0 0 0 0
Reduced Vol:	1 2	218 9	76 340 252	5 3 93 135
PCE Adj:	1.00 1.00	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00 1.00
MLF Adj:	1.00 1.00	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00 1.00
Final Vol:	1 2	218 9	76 340 252	5 3 93 135

Saturation Flow Module:

Sat/Lane:	1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.84 0.84 0.84	0.95 0.95 0.85	0.92 0.95 0.85	0.95 0.95 0.85
Lanes:	0.20 0.40 0.40	1.92 0.08 1.00	2.00 2.00 1.00	1.00 2.00 1.00
Final Sat:	318 637 637	3481 144 1615	3502 3610 1615	1805 3610 1615

Capacity Analysis Module:

Vol/Sat:	0.00 0.00	0.00 0.06 0.06	0.05 0.10 0.07	0.00 0.00 0.03 0.08
Crit Moves:	****	****	****	****
Green/Cycle:	0.23 0.23	0.23 0.23 0.34	0.11 0.29 0.29	0.11 0.29 0.29
Volume/Cap:	0.01 0.01	0.01 0.27 0.27	0.14 0.84 0.24	0.01 0.01 0.09 0.29
Delay/Veh:	25.9 25.9	25.9 27.7 27.7	19.7 52.8 23.9	22.2 34.2 22.7 24.5
User DelAdj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00 1.00
AdjDel/Veh:	25.9 25.9	25.9 27.7 27.7	19.7 52.8 23.9	22.2 34.2 22.7 24.5
DesignQueue:	0 0 0	8 0 2	15 9 0	0 3 5

The Ranch
Existing
PM Peak Hour

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #2 Washington St. (NS) / Ave. 52 (EW)

Cycle (sec): 120 Critical Vol./Cap. (X): 0.411
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 36.0
Optimal Cycle: 120 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Split Phase	Split Phase	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	20 20 20	20 20 20	10 25 25	10 25 25
Lanes:	0 0 1 0 0	1 1 0 0 1	2 0 2 0 1	1 0 2 0 1

Volume Module:

Base Vol:	2	9	3	93	1	388	178	137	3	6	215	114
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	9	3	93	1	388	178	137	3	6	215	114
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	9	3	93	1	388	178	137	3	6	215	114
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	9	3	93	1	388	178	137	3	6	215	114
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	2	9	3	93	1	388	178	137	3	6	215	114

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.86	0.86	0.86	0.95	0.95	0.85	0.92	0.95	0.85	0.95	0.95	0.85
Lanes:	0.14	0.65	0.21	1.98	0.02	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	235	1056	352	3583	39	1615	3502	3610	1615	1805	3610	1615

Capacity Analysis Module:

Vol/Sat:	0.01	0.01	0.01	0.03	0.03	0.24	0.05	0.04	0.00	0.00	0.06	0.07
Crit Moves:	0.01	0.01	0.01	0.03	0.03	0.24	0.05	0.04	0.00	0.00	0.06	0.07
Green/Cycle:	0.17	0.17	0.17	0.43	0.43	0.43	0.09	0.21	0.21	0.09	0.21	0.21
Volume/Cap:	0.05	0.05	0.05	0.06	0.06	0.55	0.55	0.18	0.01	0.04	0.29	0.34
Delay/Veh:	42.1	42.1	42.1	19.8	19.8	26.3	54.3	38.6	37.1	50.4	40.2	41.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.1	42.1	42.1	19.8	19.8	26.3	54.3	38.6	37.1	50.4	40.2	41.1
DesignQueue:	0	1	0	4	0	15	11	7	0	0	12	6

City of La Quinta
Post 2020 General Plan Recommended Alternative
AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #1 Washington St./Country Club Dr.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.836
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 48.7
Optimal Cycle: 100 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Ovl	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 3 1 0	1 0 4 0 1	2 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	115	1245	23	168	1281	577	1034	271	112	22	398	52
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	115	1245	23	168	1281	577	1034	271	112	22	398	52
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	115	1245	23	168	1281	577	1034	271	112	22	398	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	121	1311	24	177	1348	607	1088	285	118	23	419	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	121	1311	24	177	1348	607	1088	285	118	23	419	55
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	121	1311	24	177	1348	607	1088	285	118	23	419	55

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.91	0.85	0.92	0.91	0.91	0.95	0.93	0.93
Lanes:	1.00	3.93	0.07	1.00	4.00	1.00	2.00	1.41	0.59	1.00	1.77	0.23
Final Sat.:	1805	6771	124	1805	6916	1615	3502	2441	1011	1805	3137	412

Capacity Analysis Module:

Vol/Sat:	0.07	0.19	0.19	0.10	0.19	0.38	0.31	0.12	0.12	0.01	0.13	0.13
Crit Moves:	0.07	0.19	0.19	0.10	0.19	0.38	0.31	0.12	0.12	0.01	0.13	0.13
Green/Cycle:	0.10	0.25	0.25	0.10	0.25	0.53	0.28	0.38	0.38	0.15	0.25	0.25
Volume/Cap:	0.67	0.77	0.77	0.98	0.78	0.71	1.11	0.31	0.31	0.08	0.53	0.53
Delay/Veh:	52.3	37.1	37.1	106.0	37.3	20.5	99.7	22.0	22.0	36.6	33.1	33.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	52.8	37.1	37.1	106.0	37.3	20.5	99.7	22.0	22.0	36.6	33.1	33.1
DesignQueue:	6	57	1	9	59	17	47	10	4	1	18	2

Default Scenario	Tue Aug 29, 2000 17:02:37										Page 3-1	
City of La Quinta												
Post 2020 General Plan Recommended Alternative												
AM Peak Hour Conditions												
Level Of Service Computation Report												
1997 HCM Operations Method (Future Volume Alternative)												
Intersection #2 Washington St./Hovley Ln.-42nd Ave.												
Cycle (sec):	82		Critical Vol./Cap. (X):							0.749		
Loss Time (sec):	12 (Y+R = 4 sec)		Average Delay (sec/veh):							34.9		
Optimal Cycle:	82		Level Of Service:							C		

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	2	1	0	1	0	1	1	0	1	0

Volume Module:												
Base Vol:	187	1119	59	67	1236	115	202	382	196	58	360	86
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	187	1119	59	67	1236	115	202	382	196	58	360	86
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	187	1119	59	67	1236	115	202	382	196	58	360	86
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	197	1178	62	71	1301	121	213	402	206	61	379	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	197	1178	62	71	1301	121	213	402	206	61	379	91
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	197	1178	62	71	1301	121	213	402	206	61	379	91

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.95	0.90	0.90	0.95	0.90	0.90	0.95	0.92	0.92
Lanes:	1.00	2.85	0.15	1.00	2.74	0.26	1.00	1.32	0.68	1.00	1.61	0.39
Final Sat:	1805	4893	258	1805	4684	436	1805	2265	1161	1805	2827	679

Capacity Analysis Module:												
Vol/Sat:	0.11	0.24	0.24	0.04	0.28	0.28	0.12	0.18	0.18	0.03	0.13	0.13
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30
Volume/Cap:	0.89	0.79	0.79	0.32	0.91	0.91	0.97	0.58	0.58	0.28	0.44	0.44
Delay/Veh:	69.3	28.9	28.9	33.8	35.8	35.8	87.1	24.9	24.9	33.4	23.2	23.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	69.3	28.9	28.9	33.8	35.8	35.8	87.1	24.9	24.9	33.4	23.2	23.2
DesignQueue:	8	40	2	3	44	4	9	13	7	2	12	3

Default Scenario	Tue Aug 29, 2000 17:02:37										Page 4-1	
City of La Quinta												
Post 2020 General Plan Recommended Alternative												
AM Peak Hour Conditions												
Level Of Service Computation Report												
1997 HCM Operations Method (Future Volume Alternative)												
Intersection #3 Washington St./Fred Waring Dr.												
Cycle (sec):	85			Critical Vol./Cap. (X):						0.757		
Loss Time (sec):	12 (Y+R = 4 sec)			Average Delay (sec/veh):						49.5		
Optimal Cycle:	85			Level Of Service:						D		

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	2	0	2	1	0	3	0	1	0	3	0	1

Volume Module:												
Base Vol:	725	1016	45	34	1224	129	165	834	612	37	732	38
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Initial Bse:	725	1016	45	34	1224	129	165	834	0	37	732	38
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	725	1016	45	34	1224	129	165	834	0	37	732	38
User Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	689	965	43	32	1163	123	157	792	0	35	695	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	689	965	43	32	1163	123	157	792	0	35	695	36
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol:	689	965	43	32	1163	123	157	792	0	35	695	36

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.90	0.90	0.95	0.91	0.85	0.95	0.91	1.00	0.95	0.90	0.90
Lanes:	2.00	2.87	0.13	1.00	3.00	1.00	1.00	3.00	1.00	1.00	2.85	0.15
Final Sat:	3502	4936	220	1805	5187	1615	1805	5187	1900	1805	4897	254

Capacity Analysis Module:												
Vol/Sat:	0.20	0.20	0.20	0.02	0.22	0.08	0.09	0.15	0.00	0.02	0.14	0.14
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.15	0.32	0.32	0.13	0.29	0.29	0.12	0.29	0.00	0.12	0.29	0.29
Volume/Cap:	0.29	0.61	0.61	0.14	0.76	0.26	0.74	0.52	0.00	0.16	0.48	0.48
Delay/Veh:	178.6	25.2	25.2	33.2	29.6	23.2	49.1	25.3	0.0	34.1	24.9	24.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	178.6	25.2	25.2	33.2	29.6	23.2	49.1	25.3	0.0	34.1	24.9	24.9
DesignQueue:	29	33	1	1	41	4	7	27	0	1	24	1

Default Scenario	Tue Aug 29, 2000 17:02:37										Page 5-1	
City of La Quinta												
Post 2020 General Plan Recommended Alternative												
AM Peak Hour Conditions												
Level Of Service Computation Report												
1997 HCM Operations Method (Future Volume Alternative)												
Intersection #4 Washington St./Miles Ave.												
Cycle (sec):	85		Critical Vol./Cap. (X):		0.560							
Loss Time (sec):	12 (Y+R = 4 sec)		Average Delay (sec/veh):		45.2							
Optimal Cycle:	85		Level Of Service:		D							
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	2	0	2	1	0	2	0	1	1	0	1	0
Volume Module:												
Base Vol:	20	1536	40	209	1655	6	5	267	28	38	197	198
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	1536	40	209	1655	6	5	267	28	38	197	198
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	1536	40	209	1655	6	5	267	28	38	197	198
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	21	1617	42	220	1742	6	5	281	29	40	207	208
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	21	1617	42	220	1742	6	5	281	29	40	207	208
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	21	1617	42	220	1742	6	5	281	29	40	207	208
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.91	0.92	0.91	0.91	0.95	0.94	0.94	0.95	0.95	0.81
Lanes:	2.00	2.92	0.08	2.00	2.99	0.01	1.00	1.81	0.19	1.00	1.00	1.00
Final Sat:	3502	5035	131	3502	5169	18	1805	3226	333	1805	1805	1534
Capacity Analysis Module:												
Vol/Sat:	0.01	0.32	0.32	0.06	0.34	0.34	0.00	0.09	0.09	0.02	0.11	0.14
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.12	0.33	0.33	0.12	0.33	0.33	0.12	0.29	0.29	0.12	0.29	0.29
Volume/Cap:	0.05	0.97	0.97	0.53	1.02	1.02	0.02	0.30	0.30	0.19	0.39	0.46
Delay/Veh:	33.3	44.3	44.3	36.7	56.3	56.3	33.2	23.4	23.4	34.3	24.2	24.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.3	44.3	44.3	36.7	56.3	56.3	33.2	23.4	23.4	34.3	24.2	24.9
DesignQueue:	1	55	1	9	60	0	0	1	1	2	7	7

Default Scenario	Tue Aug 29, 2000 17:02:37										Page 6-1	
City of La Quinta												
Post 2020 General Plan Recommended Alternative												
AM Peak Hour Conditions												
Level of Service Computation Report												
1997 HCM Operations Method (Future Volume Alternative)												
Intersection #5 Washington St./Hwy. 111.												
Cycle (sec):	85		Critical Vol./Cap. (X):		0.807							
Loss Time (sec):	12 (Y+R = 4 sec)		Average Delay (sec/veh):		41.3							
Optimal Cycle:	85		Level of Service:		D							
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	2	0	3	1	0	0	1	0	4	0	1	0
Volume Module:												
Base Vol:	741	1020	14	439	1066	88	105	1185	784	8	991	446
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	741	1020	14	439	1066	88	105	1185	784	8	991	446
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	741	1020	14	439	1066	88	105	1185	784	8	991	446
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	780	1074	15	462	1122	93	111	1247	825	8	1043	469
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	780	1074	15	462	1122	93	111	1247	825	8	1043	469
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	780	1074	15	462	1122	93	111	1247	825	8	1043	469
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.91	0.92	0.90	0.90	0.95	0.91	0.85	0.95	0.91	0.85
Lanes:	2.00	3.94	0.06	2.00	3.69	0.31	1.00	4.00	1.00	1.00	3.00	1.00
Final Sat.:	3502	6807	95	3502	6310	523	1805	6916	1615	1805	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.22	0.16	0.16	0.13	0.18	0.18	0.06	0.18	0.51	0.00	0.20	0.29
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.19	0.29	0.29	0.19	0.29	0.29	0.11	0.29	0.49	0.12	0.26	0.46
Volume/Cap:	1.14	0.54	0.54	0.68	0.60	0.60	0.58	0.61	1.04	0.04	0.76	0.63
Delay/Veh:	115.2	25.4	25.4	34.5	26.3	26.3	40.7	26.4	66.0	33.3	31.4	19.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	115.2	25.4	25.4	34.5	26.3	26.3	40.7	26.4	66.0	33.3	31.4	19.3
DesignQueue:	31	37	1	18	39	3	5	43	22	0	38	11

Default Scenario	Tue Aug 29, 2000 17:02:37										Page 7-1	
City of La Quinta												
Post 2020 General Plan Recommended Alternative												
AM Peak Hour Conditions												
Level Of Service Computation Report												
1997 HCM Operations Method (Future Volume Alternative)												
Intersection #6 Washington St./Eisenhower Dr.												
Cycle (sec):	97	Critical Vol./Cap. (X):								0.450		
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):								49.6		
Optimal Cycle:	97	Level Of Service:								D		
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Include			Include		
Min. Green:	10	25	25	10	25	25	25	25	25	25	25	25
Lanes:	1	0	3	1	0	3	0	1	0	0	1	0
Volume Module:												
Base Vol:	9	1468	14	48	1328	269	240	2	21	17	2	49
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	9	1468	14	48	1328	269	240	2	21	17	2	49
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	9	1468	14	48	1328	269	240	2	21	17	2	49
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	9	1545	15	51	1398	283	253	2	22	18	2	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	9	1545	15	51	1398	283	253	2	22	18	2	52
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	9	1545	15	51	1398	283	253	2	22	18	2	52
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.91	0.85	0.92	0.95	0.81	0.79	0.79	0.79
Lanes:	1.00	3.96	0.04	1.00	3.00	1.00	2.00	1.00	1.00	0.25	0.03	0.72
Final Sat:	1805	6843	66	1805	5187	1615	3502	1805	1534	377	42	1089
Capacity Analysis Module:												
Vol/Sat:	0.60	0.23	0.23	0.03	0.27	0.18	0.07	0.00	0.01	0.05	0.05	0.05
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.10	0.26	0.26	0.10	0.26	0.52	0.26	0.26	0.26	0.26	0.26	0.26
Volume/Cap:	0.05	0.88	0.88	0.27	1.05	0.34	0.28	0.00	0.06	0.19	0.19	0.19
Delay/Veh:	39.3	39.8	39.8	41.0	73.5	14.1	29.0	26.8	27.2	28.3	28.3	28.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.3	39.8	39.8	41.0	73.5	14.1	29.0	26.8	27.2	28.3	28.3	28.3
DesignQueue:	0	65	1	2	60	8	10	0	1	1	0	2

Default Scenario	Tue Aug 29, 2000 17:02:37										Page 8-1	
City of La Quinta												
Post 2020 General Plan Recommended Alternative												
AM Peak Hour Conditions												
Level Of Service Computation Report												
1997 HCM Operations Method (Future Volume Alternative)												
Intersection #7 Washington St./Ave. 50												
Cycle (sec):	90					Critical Vol./Cap. (X):					0.701	
Loss Time (sec):	12 (Y+R = 4 sec)					Average Delay (sec/veh):					42.4	
Optimal Cycle:	90					Level of Service:					D	
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	3	0	1	2	0	3	0	1	0	2
Volume Module:												
Base Vol:	120	816	155	275	626	451	425	314	93	150	383	225
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	120	816	155	275	626	451	425	314	93	150	383	225
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	120	816	155	275	626	451	425	314	93	150	383	225
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	126	859	163	289	659	475	447	331	98	158	403	237
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	126	859	163	289	659	475	447	331	98	158	403	237
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	126	859	163	289	659	475	447	331	98	158	403	237
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.85	0.92	0.91	0.85	0.95	0.95	0.85	0.95	0.95	0.85
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat:	1805	5187	1615	3502	5187	1615	1805	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.07	0.17	0.10	0.08	0.13	0.29	0.25	0.09	0.06	0.09	0.11	0.15
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.11	0.28	0.28	0.11	0.28	0.48	0.20	0.34	0.34	0.14	0.28	0.39
Volume/Cap:	0.63	0.60	0.36	0.74	0.46	0.62	1.24	0.27	0.18	0.64	0.40	0.38
Delay/Veh:	44.4	28.8	26.6	46.3	27.1	18.9	164.8	21.6	20.9	42.4	26.7	20.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.4	28.8	26.6	46.3	27.1	18.9	164.8	21.6	20.9	42.4	26.7	20.1
DesignQueue:	6	32	6	13	25	13	19	11	3	7	15	7

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City of La Quinta												
Post 2020 General Plan Recommended Alternative												
AM Peak Hour Conditions												
Level Of Service Computation Report												
1997 HCM Operations Method (Future Volume Alternative)												
Intersection #8 Jefferson St./Country Club Dr.												
Cycle (sec):	85			Critical Vol./Cap. (X):						0.653		
Loss Time (sec):	12 (Y+R = 4 sec)			Average Delay (sec/veh):						50.5		
Optimal Cycle:	82			Level Of Service:						D		
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ignore			Include			Include		
Min. Green:	10	25	25	0	25	25	10	25	25	10	25	0
Lanes:	1	0	2	1	0	1	2	0	1	0	1	0
Volume Module:												
Base Vol:	230	971	127	0	560	533	629	86	302	107	225	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	230	971	127	0	560	0	629	86	302	107	225	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	230	971	127	0	560	0	629	86	302	107	225	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	235	1022	134	0	589	0	662	91	318	113	237	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	235	1022	134	0	589	0	662	91	318	113	237	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	235	1022	134	0	589	0	662	91	318	113	237	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.89	0.89	1.00	0.95	1.00	0.92	1.00	0.85	0.95	1.00	1.00
Lanes:	2.00	2.65	0.35	1.00	2.00	1.00	2.00	1.00	1.00	1.00	1.00	0.00
Final Sat:	1802	4508	591	1900	3610	1900	3502	1900	1615	1805	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.08	0.23	0.23	0.00	0.16	0.00	0.19	0.05	0.20	0.06	0.12	0.00
Crit Moves:	****			****			****			****		
Green/Cycle:	0.12	0.41	0.41	0.00	0.29	0.00	0.15	0.32	0.32	0.13	0.29	0.00
Volume/Cap:	0.12	0.55	0.55	0.00	0.55	0.00	1.24	0.15	0.62	0.49	0.42	0.00
Delay/Veh:	42.1	19.3	19.3	0.0	26.0	0.0	157.6	20.8	26.8	36.1	24.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.1	19.3	19.3	0.0	26.0	0.0	157.6	20.8	26.8	36.1	24.7	0.0
DesignQueue:	13	30	4	0	20	0	28	3	11	5	8	0

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City of La Quinta														
Post 2020 General Plan Recommended Alternative														
AM Peak Hour Conditions														
Level Of Service Computation Report														
1997 HCM Operations Method (Future Volume Alternative)														
Intersection #9 Jefferson St./Ave. 44														
Cycle (sec):	82	Critical Vol./Cap. (X):								0.669				
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):								30.6				
Optimal Cycle:	82	Level Of Service:								C				
Approach:	North Bound			South Bound			East Bound			West Bound				
Movement:	L	T	R	L	T	R	L	T	R	L	T	R		
Control:	Protected			Protected			Protected			Protected				
Rights:	Include			Include			Include			Include				
Min. Green:	10	25	25	0	25	25	10	25	25	10	25	0		
Lanes:	1	0	2	1	0	1	0	2	0	1	0	2	0	1
Volume Module:														
Base Vol:	64	1163	60	0	823	148	239	576	123	112	661	0		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Initial Bse:	64	1163	60	0	823	148	239	576	123	112	661	0		
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0		
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0		
Initial Fut:	64	1163	60	0	823	148	239	576	123	112	661	0		
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		
PHF Volume:	67	1224	63	0	866	156	252	606	129	118	696	0		
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0		
Reduced Vol:	67	1224	63	0	866	156	252	606	129	118	696	0		
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Final Vol:	67	1224	63	0	866	156	252	606	129	118	696	0		
Saturation Flow Module:														
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Adjustment:	0.95	0.90	0.90	1.00	0.89	0.89	0.95	0.95	0.85	0.95	0.95	1.00		
Lanes:	1.00	2.85	0.15	1.00	2.54	0.46	1.00	2.00	1.00	1.00	2.00	1.00		
Final Sat:	1805	4899	252	1900	4294	774	1805	3610	1615	1805	3610	1900		
Capacity Analysis Module:														
Vol/Sat:	0.04	0.25	0.25	0.00	0.20	0.20	0.14	0.17	0.08	0.07	0.19	0.00		
Crit Moves:	****			****			****			****				
Green/Cycle:	0.12	0.43	0.43	0.00	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.00		
Volume/Cap:	0.30	0.59	0.59	0.00	0.66	0.66	1.14	0.55	0.26	0.54	0.63	0.00		
Delay/Veh:	33.6	18.4	18.4	0.0	25.9	25.9	141.2	24.4	21.8	36.4	25.7	0.0		
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
AdjDel/Veh:	33.6	18.4	18.4	0.0	25.9	25.9	141.2	24.4	21.8	36.4	25.7	0.0		
DesignQueue:	3	34	2	0	29	5	10	20	4	5	23	0		

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City of La Quinta												
Post 2020 General Plan Recommended Alternative												
AM Peak Hour Conditions												
Level Of Service Computation Report												
1997 HCM Operations Method (Future Volume Alternative)												
Intersection #10 Jefferson St./Miles Ave.												
Cycle (sec):	82					Critical Vol./Cap. (X):					0.597	
Loss Time (sec):	12 (Y+R = 4 sec)					Average Delay (sec/veh):					27.2	
Optimal Cycle:	82					Level Of Service:					C	
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ignore		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	2	1	0	1	0	1	0	1	0	1
Volume Module:												
Base Vol:	40	978	14	85	890	83	159	318	54	16	299	151
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Initial Bse:	40	978	14	85	890	83	159	318	54	16	299	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	40	978	14	85	890	83	159	318	54	16	299	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	42	1029	15	89	937	87	167	335	57	17	315	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	42	1029	15	89	937	87	167	335	57	17	315	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol:	42	1029	15	89	937	87	167	335	57	17	315	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.90	0.90	0.95	1.00	0.85	0.95	1.00	1.00
Lanes:	1.00	2.96	0.04	1.00	2.75	0.25	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat:	1805	5102	74	1805	4685	435	1805	1900	1615	1805	1900	1900
Capacity Analysis Module:												
Vol/Sat:	0.02	0.20	0.20	0.05	0.20	0.20	0.09	0.18	0.04	0.01	0.17	0.00
Crit Moves:	****			****			****			****		
Green/Cycle:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.00
Volume/Cap:	0.19	0.66	0.66	0.40	0.66	0.66	0.76	0.58	0.12	0.08	0.54	0.00
Delay/Veh:	32.8	25.9	25.9	34.5	25.8	25.8	49.0	25.5	20.6	32.1	24.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.8	25.9	25.9	34.5	25.8	25.8	49.0	25.5	20.6	32.1	24.8	0.0
DesignQueue:	2	34	1	4	31	3	7	11	2	1	10	0

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City of La Quinta															
Post 2020 General Plan Recommended Alternative															
AM Peak Hour Conditions															

Level Of Service Computation Report															
1997 HCM Operations Method (Future Volume Alternative)															

Intersection #11 Jefferson St./Hwy. 111															

Cycle (sec):	82					Critical Vol./Cap. (X):				0.689					
Loss Time (sec):	12 (Y+R = 4 sec)					Average Delay (sec/veh):				28.3					
Optimal Cycle:	82					Level Of Service:				C					

Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			

Control:	Protected			Protected			Protected			Protected					
Rights:	Include			Include			Include			Include					
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25			
Lanes:	2	0	3	0	1	2	0	3	0	1	2	0	3	0	1

Volume Module:															
Base Vol:	32	668	344	177	672	110	123	1064	26	317	1246	189			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	32	668	344	177	672	110	123	1064	26	317	1246	189			
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0			
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0			
Initial Fut:	32	668	344	177	672	110	123	1064	26	317	1246	189			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
PHF Volume:	34	703	362	186	707	116	129	1120	27	334	1312	199			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0			
Reduced Vol:	34	703	362	186	707	116	129	1120	27	334	1312	199			
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Final Vol:	34	703	362	186	707	116	129	1120	27	334	1312	199			

Saturation Flow Module:															
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900			
Adjustment:	0.92	0.91	0.85	0.92	0.91	0.85	0.92	0.91	0.85	0.92	0.91	0.85			
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00			
Final Sat:	1802	5187	1615	3502	5187	1615	3502	5187	1615	3502	5187	1615			

Capacity Analysis Module:															
Vol/Sat:	0.01	0.14	0.22	0.05	0.14	0.07	0.04	0.22	0.02	0.10	0.25	0.12			
Crit Moves:	****			****			****			****					
Green/Cycle:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30			
Volume/Cap:	0.08	0.44	0.74	0.44	0.45	0.24	0.30	0.71	0.05	0.78	0.83	0.40			
Delay/Veh:	32.0	23.1	31.2	34.1	23.1	21.6	33.2	26.8	20.2	44.0	30.4	23.1			
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
AdjDel/Veh:	32.0	23.1	31.2	34.1	23.1	21.6	33.2	26.8	20.2	44.0	30.4	23.1			
DesignQueue:	1	23	12	8	23	4	5	37	1	14	44				

City of La Quinta
Post 2020 General Plan Recommended Alternative
AM Peak Hour Conditions

Level of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #12 Jefferson St./Ave. 48												
Cycle (sec):	85			Critical Vol./Cap. (X):						0.838		
Loss Time (sec):	12 (Y+R = 4 sec)			Average Delay (sec/veh):						46.7		
Optimal Cycle:	85			Level Of Service:						D		

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
----- ----- ----- -----												
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	2	0	2	1	0	2	1	0	2	0	1	0
----- ----- ----- -----												
Volume Module:												
Base Vol:	621	873	25	40	896	116	200	632	368	83	684	22
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	621	873	25	40	896	116	200	632	368	83	684	22
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	621	873	25	40	896	116	200	632	368	83	684	22
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	654	919	26	42	943	122	211	665	387	87	720	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	654	919	26	42	943	122	211	665	387	87	720	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	654	919	26	42	943	122	211	665	387	87	720	23
----- ----- ----- -----												
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.91	0.95	0.89	0.89	0.95	0.95	0.85	0.92	0.95	0.95
Lanes:	2.00	2.92	0.08	1.00	2.66	0.34	1.00	2.00	1.00	2.00	1.94	0.06
Final Sat.:	3502	5024	142	1805	4515	584	1805	3610	1615	3502	3481	111
----- ----- ----- -----												
Capacity Analysis Module:												
Vol/Sat:	0.19	0.18	0.18	0.02	0.21	0.21	0.12	0.18	0.24	0.02	0.21	0.21
Crit Moves:	****			****			****			****		
Green/Cycle:	0.15	0.32	0.32	0.13	0.29	0.29	0.12	0.29	0.45	0.12	0.29	0.29
Volume/Cap:	1.22	0.57	0.57	0.18	0.71	0.71	0.99	0.63	0.54	0.21	0.70	0.70
Delay/Veh:	151.5	24.6	24.6	33.5	28.4	28.4	97.3	27.1	17.9	34.2	28.9	28.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	151.5	24.6	24.6	33.5	28.4	28.4	97.3	27.1	17.9	34.2	28.9	28.9
DesignQueue:	27	31	1	2	33	4	9	23	11	4	25	1

City of La Quinta
Post 2020 General Plan Recommended Alternative
AM Peak Hour Conditions

Level of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #13 Jefferson St./Ave. 50												

Cycle (sec):	97			Critical Vol./Cap. (X):			0.511					
Loss Time (sec):	12 (Y+R = 4 sec)			Average Delay (sec/veh):			30.5					
Optimal Cycle:	97			Level of Service:			C					

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Include			Include		
Min. Green:	10	25	25	10	25	25	25	25	25	25	25	25
Lanes:	2	0	3	0	1	2	0	3	0	1	1	1

Volume Module:												
Base Vol:	71	786	31	107	717	384	316	365	45	45	413	240
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	71	786	31	107	717	384	316	365	45	45	413	240
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	71	786	31	107	717	384	316	365	45	45	413	240
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	75	827	33	113	755	404	333	384	47	47	435	253
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	75	827	33	113	755	404	333	384	47	47	435	253
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	75	827	33	113	755	404	333	384	47	47	435	253

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.85	0.92	0.91	0.85	0.90	0.95	0.85	0.90	0.95	0.85
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.43	1.57	1.00	1.00	2.00	1.00
Final Sat.:	3502	5187	1615	3502	5187	1615	2455	2831	1615	1715	3610	1615

Capacity Analysis Module:												
Vol/Sat:	0.02	0.16	0.02	0.03	0.15	0.25	0.14	0.14	0.03	0.03	0.12	0.16
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.10	0.26	0.26	0.10	0.26	0.52	0.26	0.26	0.26	0.26	0.26	0.26
Volume/Cap:	0.21	0.62	0.08	0.31	0.56	0.49	0.53	0.53	0.11	0.11	0.47	0.61
Delay/Veh:	40.2	32.7	27.4	40.8	31.8	15.6	31.3	31.3	27.6	27.5	30.7	34.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.2	32.7	27.4	40.8	31.8	15.6	31.3	31.3	27.6	27.5	30.7	34.3
DesignQueue:	4	34	1	6	31	11	14	16	2	2	18	10

City of La Quinta
Post 2020 General Plan Recommended Alternative
AM Peak Hour Conditions

Level of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #15 Madison St. Ave. 50

Cycle (sec): 82 Critical Vol./Cap. (X): 0.811
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 40.1
Optimal Cycle: 82 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	50 966 80	192 719 43	82 365 20	82 525 211
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	50 966 80	192 719 43	82 365 20	82 525 211
Added Vol:	0 0 0	0 0 0	0 0 0	0 0 0
PasserByVol:	0 0 0	0 0 0	0 0 0	0 0 0
Initial Fut:	50 966 80	192 719 43	82 365 20	82 525 211
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	53 1017 84	202 757 45	86 384 21	86 553 222
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	53 1017 84	202 757 45	86 384 21	86 553 222
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol.:	53 1017 84	202 757 45	86 384 21	86 553 222

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.94 0.94	0.95 0.94 0.94	0.95 0.94 0.94	0.95 0.91 0.91
Lanes:	1.00 1.85 0.15	1.00 1.89 0.11	1.00 1.90 0.10	1.00 1.43 0.57
Final Sat.:	1805 3298 272	1805 3380 201	1805 3395 186	1805 2465 990

Capacity Analysis Module:

Vol/Sat:	0.03 0.31 0.31	0.11 0.22 0.22	0.05 0.11 0.11	0.05 0.22 0.22
Crit Moves:	***	***	***	***
Green/Cycle:	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30
Volume/Cap:	0.24 1.01 1.01	0.92 0.73 0.73	0.39 0.37 0.37	0.39 0.74 0.74
Delay/Veh:	33.1 58.6 58.6	74.3 28.2 28.2	34.3 22.6 22.6	34.3 28.3 28.3
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	33.1 58.6 58.6	74.3 28.2 28.2	34.3 22.6 22.6	34.3 28.3 28.3
DesignQueue:	2 35 3	8 25 2	3 13 1	3 19 7

City of La Quinta
Post 2020 General Plan Recommended Alternative
AM Peak Hour Conditions

Level of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #16 Madison St./Ave. 52

Cycle (sec): 82 Critical Vol./Cap. (X): 0.796
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 38.5
Optimal Cycle: 82 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	176 647 21	215 496 85	115 443 156	28 661 292
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	176 647 21	215 496 85	115 443 156	28 661 292
Added Vol:	0 0 0	0 0 0	0 0 0	0 0 0
PasserByVol:	0 0 0	0 0 0	0 0 0	0 0 0
Initial Fut:	176 647 21	215 496 85	115 443 156	28 661 292
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	185 681 22	226 522 89	121 466 164	29 696 307
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	185 681 22	226 522 89	121 466 164	29 696 307
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol.:	185 681 22	226 522 89	121 466 164	29 696 307

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.95 0.95	0.95 0.93 0.93	0.95 0.91 0.91	0.95 0.91 0.91
Lanes:	1.00 1.94 0.06	1.00 1.71 0.29	1.00 1.48 0.52	1.00 1.39 0.61
Final Sat.:	1805 3480 112	1805 3016 514	1805 2566 903	1805 2390 1054

Capacity Analysis Module:

Vol/Sat:	0.10 0.20 0.20	0.13 0.17 0.17	0.07 0.18 0.18	0.02 0.29 0.29
Crit Moves:	***	***	***	***
Green/Cycle:	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30
Volume/Cap:	0.34 0.64 0.64	1.03 0.57 0.57	0.55 0.60 0.60	0.13 0.96 0.96
Delay/Veh:	59.3 25.9 25.9	103.8 24.7 24.7	36.8 25.1 25.1	32.4 45.9 45.9
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	59.3 25.9 25.9	103.8 24.7 24.7	36.8 25.1 25.1	32.4 45.9 45.9
DesignQueue:	8 23 1	9 17 3	5 15 5	1 24 10

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City of La Quinta											
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1997 HCM Operations Method (Future Volume Alternative)											
Intersection #17 Jackson St./Airport Blvd.											
Cycle (sec):	82	Critical Vol./Cap. (X):								0.767	
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):								46.6	
Optimal Cycle:	82	Level Of Service:								D	
Approach:	North Bound	South Bound	East Bound	West Bound							
Movement:	L - T - R	L - T - R	L - T - R	L - T - R							
Control:	Protected	Protected	Protected	Protected							
Rights:	Include	Include	Include	Include							
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25							
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0							
Volume Module:											
Base Vol:	53 434 223	275 135 41	52 589 20	75 433 401							
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00							
Initial Bse:	53 434 223	275 135 41	52 589 20	75 433 401							
Added Vol:	0 0 0	0 0 0	0 0 0	0 0 0							
PasserByVol:	0 0 0	0 0 0	0 0 0	0 0 0							
Initial Fut:	53 434 223	275 135 41	52 589 20	75 433 401							
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00							
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95							
PHF Volume:	56 457 235	289 142 43	55 620 21	79 456 422							
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0							
Reduced Vol:	56 457 235	289 142 43	55 620 21	79 456 422							
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00							
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00							
Final Vol:	56 457 235	289 142 43	55 620 21	79 456 422							
Saturation Flow Module:											
Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900							
Adjustment:	0.90 0.90 0.90	0.95 0.92 0.92	0.95 0.95 0.95	0.95 0.88 0.88							
Lanes:	1.00 1.32 0.68	1.00 1.54 0.46	1.00 1.93 0.07	1.00 1.04 0.96							
Final Sat:	1805 2262 1163	1805 2674 810	1805 3474 118	1805 1740 1610							
Capacity Analysis Module:											
Vol/Sat:	0.03 0.20 0.20	0.16 0.05 0.05	0.03 0.18 0.18	0.04 0.26 0.26							
Crit Moves:	****	****	****	****							
Green/Cycle:	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30							
Volume/Cap:	0.33 0.66 0.66	1.31 0.17 0.17	0.25 0.59 0.59	0.36 0.86 0.86							
Delay/Veh:	31.2 26.4 26.4	205.3 21.0 21.0	33.2 24.9 24.9	34.1 34.3 34.3							
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00							
AdjDel/Veh:	31.2 26.4 26.4	205.3 21.0 21.0	33.2 24.9 24.9	34.1 34.3 34.3							
DesignQueue:	2 15 8	12 5 1	2 21 1	3 15 14							

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1997 HCM Operations Method (Future Volume Alternative)															
Intersection #18 Harrison St./Airport Blvd.															
Cycle (sec):	82	Critical Vol./Cap. (X):								0.625					
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):								39.8					
Optimal Cycle:	82	Level of Service:								D					
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Protected			Protected			Protected			Protected					
Rights:	Include			Include			Include			Include					
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25			
Lanes:	1	0	2	1	0	1	0	1	1	0	1	0	1	1	0
Volume Module:															
Base Vol:	49	1266	159	22	999	190	234	729	74	103	306	3			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	49	1266	159	22	999	190	234	729	74	103	306	3			
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0			
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0			
Initial Fut:	49	1266	159	22	999	190	234	729	74	103	306	3			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
PHF Volume:	52	1333	167	23	1052	200	246	767	78	108	322	3			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0			
Reduced Vol:	52	1333	167	23	1052	200	246	767	78	108	322	3			
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Final Vol:	52	1333	167	23	1052	200	246	767	78	108	322	3			
Saturation Flow Module:															
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900			
Adjustment:	0.95	0.89	0.89	0.95	0.89	0.89	0.95	0.94	0.94	0.95	0.95	0.95			
Lanes:	1.00	2.67	0.33	1.00	2.52	0.48	1.00	1.82	0.18	1.00	1.98	0.02			
Final Sat:	1805	4531	568	1805	4254	809	1805	3231	329	1805	3573	33			
Capacity Analysis Module:															
Vol/Sat:	0.03	0.29	0.29	0.01	0.25	0.25	0.14	0.24	0.24	0.06	0.09	0.09			
Crit Moves:	****			****			****			****					
Green/Cycle:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30			
Volume/Cap:	0.24	0.96	0.96	0.10	0.81	0.81	1.12	0.78	0.78	0.49	0.30	0.30			
Delay/Veh:	33.1	43.3	43.3	32.2	29.7	29.7	131.8	29.6	29.6	35.3	21.9	21.9			
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
AdjDel/Veh:	33.1	43.3	43.3	32.2	29.7	29.7	131.8	29.6	29.6	35.3	21.9	21.9			
DesignQueue:	2	45	6	1	35	7	10	26	3	4	10	0			

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AM Peak Hour Conditions												
Level Of Service Computation Report												
1997 HCM Operations Method (Future Volume Alternative)												
Intersection #19 Grapefruit Blvd./Airport Blvd.												
Cycle (sec):	85	Critical Vol./Cap. (X):								0.802		
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):								45.9		
Optimal Cycle:	85	Level Of Service:								D		
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	2	0	1	1	0	1	0	3	0	1	2	0
Volume Module:												
Base Vol:	208	595	381	33	621	184	204	709	310	552	845	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	208	595	381	33	621	184	204	709	310	552	845	90
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	208	595	381	33	621	184	204	709	310	552	845	90
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	219	626	401	35	654	194	215	746	326	581	889	95
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	219	626	401	35	654	194	215	746	326	581	889	95
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	219	626	401	35	654	194	215	746	326	581	889	95
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.89	0.89	0.95	0.92	0.92	0.95	0.91	0.85	0.92	0.90	0.90
Lanes:	2.00	1.22	0.78	1.00	1.54	0.46	1.00	3.00	1.00	2.00	2.71	0.29
Final Sat.:	3502	2073	1328	1805	2689	798	1805	5187	1615	3502	4616	493
Capacity Analysis Module:												
Vol/Sat:	0.06	0.30	0.30	0.02	0.24	0.24	0.12	0.14	0.20	0.17	0.19	0.19
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.12	0.29	0.29	0.12	0.29	0.29	0.15	0.29	0.29	0.15	0.29	0.29
Volume/Cap:	0.53	1.03	1.03	0.16	0.83	0.83	0.78	0.49	0.69	1.08	0.65	0.65
Delay/Veh:	36.6	65.5	65.5	34.1	33.6	33.6	47.8	25.0	30.7	99.9	27.3	27.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.6	65.5	65.5	34.1	33.6	33.6	47.8	25.0	30.7	99.9	27.3	27.3
DesignQueue:	9	22	14	1	23	7	9	26	11	24	31	3

Default Scenario												Tue Aug 29, 2000 17:02:37												Page 21-1																							
City of La Quinta																																															
Post 2020 General Plan Recommended Alternative																																															
AM Peak Hour Conditions																																															
Level Of Service Computation Report																																															
1997 HCM Operations Method (Future Volume Alternative)																																															
Intersection #20 Grapefruit Blvd./Ave. 62																																															

Cycle (sec):												82												Critical Vol./Cap. (X):				0.484																			
Loss Time (sec):												12 (Y+R = 4 sec)												Average Delay (sec/veh):				50.3																			
Optimal Cycle:												82												Level Of Service:				D																			

Approach:												North Bound						South Bound						East Bound						West Bound																	
Movement:												L			T			R			L			T			R			L			T			R			L			T			R		

Control:												Protected						Protected						Protected						Protected																	
Rights:												Include						Include						Include						Include																	
Min. Green:												10			25			25			10			25			25			10			25			25											
Lanes:												1			0			1			1			0			1			0			1			0			1			0					

Volume Module:																																															
Base Vol:												152			443			62			58			227			31			69			81			111			263			69			135		
Growth Adj:												1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00		
Initial Bse:												152			443			62			58			227			31			69			81			111			263			69			135		
Added Vol:												0			0			0			0			0			0			0			0			0			0			0			0		
PasserByVol:												0			0			0			0			0			0			0			0			0			0			0			0		
Initial Fut:												152			443			62			58			227			31			69			81			111			263			69			135		
User Adj:												1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00		
PHF Adj:												0.95			0.95			0.95			0.95			0.95			0.95			0.95			0.95			0.95			0.95			0.95			0.95		
PHF Volume:												160			466			65			61			239			33			73			85			117			277			73			142		
Reduct Vol:												0			0			0			0			0			0			0			0			0			0			0			0		
Reduced Vol:												160			466			65			61			239			33			73			85			117			277			73			142		
PCE Adj:												1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00		
MLF Adj:												1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00		
Final Vol.:												160			466			65			61			239			33			73			85			117			277			73			142		

Saturation Flow Module:																																															
Sat/Lane:												1900			1900			1900			1900			1900			1900			1900			1900			1900			1900			1900					
Adjustment:												0.95			0.93			0.93			0.95			0.93			0.93			0.95			0.95			0.81			0.95			0.95			0.81		
Lanes:												1.00			1.76			0.24			1.00			1.76			0.24			1.00			1.00			1.00			1.00			1.00			1.00		
Final Sat.:												1805			3111			434			1805			3115			430			1805			1805			1534			1805			1805			1534		

Capacity Analysis Module:																																															
Vol/Sat:												0.09			0.15			0.15			0.03			0.08			0.08			0.04			0.05			0.08			0.15			0.04			0.09		
Crit Moves:												****			****			****			****			****			****			****			****			****			****			****					
Green/Cycle:												0.12			0.30			0.30			0.12			0.30			0.30			0.12			0.30			0.30			0.12			0.30			0.30		
Volume/Cap:												0.73			0.49			0.49			0.28			0.25			0.25			0.33			0.15			0.25			1.26			0.13			0.30		
Delay/Veh:												46.2			23.7			23.7			33.4			21.6			21.6			33.8			20.8			21.6			183.6			20.7			22.1		
User DelAdj:												1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00			1.00		
AdjDel/Veh:												46.2			23.7			23.7			33.4			21.6			21.6			33.8			20.8			21.6			183.6			20.7			22.1		
DesignQueue:												7			15			2			2			8			1			3			3			4			12			2			5		

City of La Quinta
Post 2020 General Plan Recommended Alternative
PM Peak Hour Conditions

Scenario: Default Scenario

Command: Default Command
Volume: Default Volume
Geometry: Default Geometry
Impact Fee: Default Impact Fee
Trip Generation: Default Trip Generation
Trip Distribution: Default Trip Distribution
Paths: Default Paths
Routes: Default Routes
Configuration: Default Configuration

City of La Quinta
Post 2020 General Plan Recommended Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #1 Washington St./Country Club Dr.

Cycle (sec): 120 Critical Vol./Cap. (X): 0.923
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 49.4
Optimal Cycle: 120 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Ovl	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 3 1 0	1 0 4 0 1	2 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	162 1395 25	70 1622 922	1011 378 135	24 411 43
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	162 1395 25	70 1622 922	1011 378 135	24 411 43
Added Vol:	0 0 0	0 0 0	0 0 0	0 0 0
PasserByVol:	0 0 0	0 0 0	0 0 0	0 0 0
Initial Fut:	162 1395 25	70 1622 922	1011 378 135	24 411 43
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	171 1468 26	74 1707 971	1064 398 142	25 433 45
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	171 1468 26	74 1707 971	1064 398 142	25 433 45
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol.:	171 1468 26	74 1707 971	1064 398 142	25 433 45

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.91 0.91	0.95 0.91 0.85	0.92 0.91 0.91	0.95 0.94 0.94
Lanes:	1.00 3.93 0.07	1.00 4.00 1.00	2.00 1.47 0.53	1.00 1.81 0.19
Final Sat:	1805 6775 120	1805 6916 1615	3502 2557 912	1805 3224 335

Capacity Analysis Module:

Vol/Sat:	0.09 0.22 0.22	0.04 0.25 0.60	0.30 0.16 0.16	0.01 0.13 0.13
Crit Moves:	****	****	****	****
Green/Cycle:	0.09 0.31 0.31	0.08 0.30 0.60	0.30 0.36 0.36	0.15 0.21 0.21
Volume/Cap:	1.01 0.71 0.71	0.49 0.84 1.01	1.01 0.43 0.43	0.09 0.64 0.64
Delay/Veh:	125.0 38.0 38.0	55.1 42.7 54.6	71.1 28.9 28.9	44.6 45.4 45.4
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	125.0 38.0 38.0	55.1 42.7 54.6	71.1 28.9 28.9	44.6 45.4 45.4
DesignQueue:	11 72 1	5 85 30	53 18 6	1 24 2

Default Scenario	Tue Aug 29, 2000 17:05:38										Page 3-1
City of La Quinta											
Post 2020 General Plan Recommended Alternative											
PM Peak Hour Conditions											

Level Of Service Computation Report											
1997 HCM Operations Method (Future Volume Alternative)											

Intersection #2 Washington St./Hovley Ln.-42nd Ave.											

Cycle (sec):	120	Critical Vol./Cap. (X):								0.957	
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):								51.2	
Optimal Cycle:	120	Level Of Service:								D	

Approach:	North Bound	South Bound				East Bound				West Bound	
Movement:	L - T - R	L - T - R				L - T - R				L - T - R	

Control:	Protected	Protected				Protected				Protected	
Rights:	Include	Include				Include				Include	
Min. Green:	10 25 25	10 25 25				10 25 25				10 25 25	
Lanes:	1 0 2 1 0	1 0 2 1 0				1 0 1 1 0				1 0 1 1 0	

Volume Module:											
Base Vol:	220 1284	81	170 1493	159	186 674	195	72 812	142			
Growth Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00			
Initial Bse:	220 1284	81	170 1493	159	186 674	195	72 812	142			
Added Vol:	0 0	0	0 0	0	0 0	0	0 0	0			
PasserByVol:	0 0	0	0 0	0	0 0	0	0 0	0			
Initial Fut:	220 1284	81	170 1493	159	186 674	195	72 812	142			
User Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00			
PHF Adj:	0.95 0.95	0.95	0.95 0.95	0.95	0.95 0.95	0.95	0.95 0.95	0.95			
PHF Volume:	232 1352	85	179 1572	167	196 709	205	76 855	149			
Reduct Vol:	0 0	0	0 0	0	0 0	0	0 0	0			
Reduced Vol:	232 1352	85	179 1572	167	196 709	205	76 855	149			
PCE Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00			
MLF Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00			
Final Vol:	232 1352	85	179 1572	167	196 709	205	76 855	149			

Saturation Flow Module:											
Sat/Lane:	1900 1900	1900	1900 1900	1900	1900 1900	1900	1900 1900	1900			
Adjustment:	0.95 0.90	0.90	0.95 0.90	0.90	0.95 0.92	0.92	0.95 0.93	0.93			
Lanes:	1.00 2.82	0.18	1.00 2.71	0.29	1.00 1.55	0.45	1.00 1.70	0.30			
Final Sat:	1805 4836	304	1805 4623	491	1805 2705	782	1805 3007	524			

Capacity Analysis Module:											
Vol/Sat:	0.13 0.28	0.28	0.10 0.34	0.34	0.11 0.26	0.26	0.04 0.28	0.28			
Crit Moves:	****		****		****		****				
Green/Cycle:	0.13 0.36	0.36	0.13 0.36	0.36	0.11 0.33	0.33	0.08 0.30	0.30			
Volume/Cap:	0.96 0.77	0.77	0.77 0.96	0.96	0.96 0.80	0.80	0.51 0.96	0.96			
Delay/Veh:	57.4 36.1	36.1	65.5 50.3	50.3	103.5 40.9	40.9	55.4 59.8	59.8			
User DelAdj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00			
AdjDel/Veh:	57.4 36.1	36.1	65.5 50.3	50.3	103.5 40.9	40.9	55.4 59.8	59.8			
DesignQueue:	14 62	4	11 73	8	12 34	10	5 43	7			

Default Scenario	Tue Aug 29, 2000 17:05:38										Page 4-1
City of La Quinta											
Post 2020 General Plan Recommended Alternative											
PM Peak Hour Conditions											

Level Of Service Computation Report											
1997 HCM Operations Method (Future Volume Alternative)											

Intersection #3 Washington St./Fred Waring Dr.											

Cycle (sec):	120	Critical Vol./Cap. (X):								0.930	
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):								46.8	
Optimal Cycle:	120	Level Of Service:								D	

Approach:	North Bound	South Bound				East Bound				West Bound	
Movement:	L - T - R	L - T - R				L - T - R				L - T - R	

Control:	Protected	Protected				Protected				Protected	
Rights:	Include	Include				Ignore				Include	
Min. Green:	10 25 25	10 25 25				10 25 25				10 25 25	
Lanes:	2 0 2 1 0	1 0 3 0 1				1 0 3 0 1				1 0 2 1 0	

Volume Module:											
Base Vol:	569 1469	47	47 1368	181	150 1151	1276	53 1276	51			
Growth Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	0.00	1.00 1.00	1.00			
Initial Bse:	569 1469	47	47 1368	181	150 1151	0	53 1276	51			
Added Vol:	0 0 0	0	0 0 0	0	0 0 0	0	0 0 0	0			
PasserByVol:	0 0 0	0	0 0 0	0	0 0 0	0	0 0 0	0			
Initial Fut:	569 1469	47	47 1368	181	150 1151	0	53 1276	51			
User Adj:	0.95 0.95	0.95	0.95 0.95	0.95	0.95 0.95	0.00	0.95 0.95	0.95			
PHF Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	0.00	1.00 1.00	1.00			
PHF Volume:	521 1396	45	45 1300	172	143 1093	0	50 1212	48			
Reduct Vol:	0 0 0	0	0 0 0	0	0 0 0	0	0 0 0	0			
Reduced Vol:	521 1396	45	45 1300	172	143 1093	0	50 1212	48			
PCE Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	0.00	1.00 1.00	1.00			
MLF Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	0.00	1.00 1.00	1.00			
Final Vol:	521 1396	45	45 1300	172	143 1093	0	50 1212	48			

Saturation Flow Module:											
Sat/Lane:	1900 1900	1900	1900 1900	1900	1900 1900	1900	1900 1900	1900			
Adjustment:	0.92 0.91	0.91	0.95 0.91	0.85	0.95 0.91	1.00	0.95 0.90	0.90			
Lanes:	2.00 2.91	0.09	1.00 3.00	1.00	1.00 3.00	1.00	1.00 2.89	0.11			
Final Sat:	3502 5000	161	1805 5187	1615	1805 5187	1900	1805 4959	196			

Capacity Analysis Module:											
Vol/Sat:	0.26 0.28	0.28	0.02 0.25	0.11	0.08 0.21	0.00	0.03 0.24	0.24			
Crit Moves:	****	****	****	****	****	****	****	****			
Green/Cycle:	0.28 0.47	0.47	0.08 0.27	0.27	0.09 0.26	0.00	0.08 0.26	0.26			
Volume/Cap:	1.93 0.60	0.60	0.30 0.93	0.40	0.93 0.80	0.00	0.33 0.93	0.93			
Delay/Veh:	55.6 23.9	23.9	52.8 54.0	36.4	106.7 44.5	0.0	53.2 54.7	54.7			
User DelAdj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00			
AdjDel/Veh:	55.6 23.9	23.9	52.8 54.0	36.4	106.7 44.5	0.0	53.2 54.7	54.7			
DesignQueue:	47 53	2	3 67	9	9 56	0	3 63	3			

Default Scenario		Tue Aug 29, 2000 17:05:38				Page 5-1							
City of La Quinta													
Post 2020 General Plan Recommended Alternative													
PM Peak Hour Conditions													

Level Of Service Computation Report													
1997 HCM Operations Method (Future Volume Alternative)													

Intersection #4 Washington St./Miles Ave.													

Cycle (sec):	120	Critical Vol./Cap. (X):				0.917							
Loss Time (sec :	12 (Y+R = 4 sec)	Average Delay (sec/veh):				50.7							
Optimal Cycle:	120	Level Of Service:				D							

Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25	
Lanes:	2	0	2	1	0	2	0	2	1	0	1	0	1

Volume Module:													
Base Vol:	261	2227	109	360	2298	3	21	242	234	43	513	230	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	261	2227	109	360	2298	3	21	242	234	43	513	230	
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0	
Initial Fut:	261	2227	109	360	2298	3	21	242	234	43	513	230	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
PHF Volume:	275	2344	115	379	2419	3	22	255	246	45	540	242	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	275	2344	115	379	2419	3	22	255	246	45	540	242	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Final Vol:	275	2344	115	379	2419	3	22	255	246	45	540	242	

Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.92	0.90	0.90	0.92	0.91	0.91	0.95	0.88	0.88	0.95	0.91	0.91	
Lanes:	2.00	2.86	0.14	2.00	2.99	0.01	1.00	1.02	0.98	1.00	1.38	0.62	
Final Sat:	3502	4910	241	3502	5181	6	1805	1701	1641	1805	2378	1066	

Capacity Analysis Module:													
Vol/Sat:	0.38	0.48	0.48	0.11	0.47	0.47	0.01	0.15	0.15	0.02	0.23	0.23	
Crit Moves:	****			****			****			****			
Green/Cycle:	0.38	0.48	0.48	0.11	0.51	0.51	0.08	0.22	0.22	0.09	0.23	0.23	
Volume/Cap:	0.24	1.00	1.00	1.00	0.92	0.92	0.15	0.67	0.67	0.28	1.00	1.00	
Delay/Veh:	52.2	48.0	48.0	98.2	33.8	33.8	51.5	45.1	45.1	52.0	77.1	77.1	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	52.2	48.0	48.0	98.2	33.8	33.8	51.5	45.1	45.1	52.0	77.1	77.1	
DesignQueue:	17	92	5	23	90	0	1	14	13	3	29	13	

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Level Of Service Computation Report											
1997 HCM Operations Method (Future Volume Alternative)											

Intersection #5 Washington St./Hwy. 111.											

Cycle (sec):		120		Critical Vol./Cap. (X):				0.872			
Loss Time (sec):		12 (Y+R = 4 sec)		Average Delay (sec/veh):				48.6			
Optimal Cycle:		120		Level Of Service:				D			

Approach:		North Bound			South Bound			East Bound		West Bound	
Movement:		L - T - R			L - T - R			L - T - R		L - T - R	

Control:		Protected			Protected			Protected		Protected	
Rights:		Include			Include			Ovl		Ovl	
Min. Green:		10 25 25			10 25 25			10 25 25		10 25 25	
Lanes:		2 0 3 1 0			2 0 3 1 0			1 0 4 0 1		1 0 3 0 1	

Volume Module:											
Base Vol:		828 1638 15			654 1684 121			167 958 763		17 1088 615	
Growth Adj:		1.00 1.00 1.00			1.00 1.00 1.00			1.00 1.00 1.00		1.00 1.00 1.00	
Initial Bse:		828 1638 15			654 1684 121			167 958 763		17 1088 615	
Added Vol:		0 0 0			0 0 0			0 0 0		0 0 0	
PasserByVol:		0 0 0			0 0 0			0 0 0		0 0 0	
Initial Fut:		828 1638 15			654 1684 121			167 958 763		17 1088 615	
User Adj:		1.00 1.00 1.00			1.00 1.00 1.00			1.00 1.00 1.00		1.00 1.00 1.00	
PHF Adj:		0.95 0.95 0.95			0.95 0.95 0.95			0.95 0.95 0.95		0.95 0.95 0.95	
PHF Volume:		872 1724 16			688 1773 127			176 1008 803		18 1145 647	
Reduct Vol:		0 0 0			0 0 0			0 0 0		0 0 0	
Reduced Vol:		872 1724 16			688 1773 127			176 1008 803		18 1145 647	
PCE Adj:		1.00 1.00 1.00			1.00 1.00 1.00			1.00 1.00 1.00		1.00 1.00 1.00	
MLF Adj:		1.00 1.00 1.00			1.00 1.00 1.00			1.00 1.00 1.00		1.00 1.00 1.00	
Final Vol.:		872 1724 16			688 1773 127			176 1008 803		18 1145 647	

Saturation Flow Module:											
Sat/Lane:		1900 1900 1900			1900 1900 1900			1900 1900 1900		1900 1900 1900	
Adjustment:		0.92 0.91 0.91			0.92 0.90 0.90			0.95 0.91 0.85		0.95 0.91 0.85	
Lanes:		2.00 3.96 0.04			2.00 3.73 0.27			1.00 4.00 1.00		1.00 3.00 1.00	
Final Sat.:		3502 6846 64			3502 6389 458			1805 6916 1615		1805 5187 1615	

Capacity Analysis Module:											
Vol/Sat:		0.25 0.25 0.25			0.20 0.28 0.28			0.10 0.15 0.50		0.01 0.22 0.40	
Crit Moves:		****			****			****		****	
Green/Cycle:		0.26 0.31 0.31			0.24 0.29 0.29			0.11 0.26 0.52		0.08 0.24 0.48	
Volume/Cap:		0.95 0.81 0.81			0.81 0.95 0.95			0.92 0.56 0.95		0.12 0.92 0.83	
Delay/Veh:		61.9 40.3 40.3			48.5 52.0 52.0			96.9 38.7 46.6		51.3 56.0 34.3	
User DelAdj:		1.00 1.00 1.00			1.00 1.00 1.00			1.00 1.00 1.00		1.00 1.00 1.00	
AdjDel/Veh:		61.9 40.3 40.3			48.5 52.0 52.0			96.9 38.7 46.6		51.3 56.0 34.3	
DesignQueue:		46 84 1			36 90 6			11 51 29		1 61 25	

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1997 HCM Operations Method (Future Volume Alternative)											
Intersection #6 Washington St./Eisenhower Dr.											
Cycle (sec): 115 Critical Vol./Cap. (X): 0.646											
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 51.0											
Optimal Cycle: 115 Level Of Service: D											
Approach: North Bound South Bound East Bound West Bound											
Movement: L - T - R L - T - R L - T - R L - T - R											
Control: Protected Protected Split Phase Split Phase											
Rights: Include Ovl Include Include											
Min. Green: 10 25 25 10 25 25 25 25 25 25 25 25											
Lanes: 1 0 3 1 0 1 0 3 0 1 2 0 1 1 0 0 0 1 0 0											
Volume Module:											
Base Vol: 22 1913 29 45 1971 389 401 3 14 26 3 38											
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00											
Initial Bse: 22 1913 29 45 1971 389 401 3 14 26 3 38											
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0											
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0											
Initial Fut: 22 1913 29 45 1971 389 401 3 14 26 3 38											
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00											
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95											
PHF Volume: 23 2014 31 47 2075 409 422 3 15 27 3 40											
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0											
Reduced Vol: 23 2014 31 47 2075 409 422 3 15 27 3 40											
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00											
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00											
Final Vol: 23 2014 31 47 2075 409 422 3 15 27 3 40											
Saturation Flow Module:											
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900											
Adjustment: 0.95 0.91 0.91 0.95 0.91 0.85 0.92 0.95 0.81 0.81 0.81 0.81											
Lanes: 1.00 3.94 0.06 1.00 3.00 1.00 2.00 1.00 1.00 0.39 0.04 0.57											
Final Sat: 1805 6798 105 1805 5187 1615 3502 1805 1534 592 66 877											
Capacity Analysis Module:											
Vol/Sat: 0.01 0.30 0.30 0.03 0.40 0.25 0.12 0.00 0.01 0.05 0.05 0.05											
Crit Moves: ****											
Green/Cycle: 0.09 0.37 0.37 0.09 0.37 0.59 0.22 0.22 0.22 0.22 0.22 0.22											
Volume/Cap: 0.15 0.79 0.79 0.30 1.07 0.43 0.55 0.01 0.04 0.21 0.21 0.21											
Delay/Veh: 49.0 33.8 33.8 50.3 78.1 13.2 40.9 35.3 35.6 37.2 37.2 37.2											
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00											
AdjDel/Veh: 49.0 33.8 33.8 50.3 78.1 13.2 40.9 35.3 35.6 37.2 37.2 37.2											
DesignQueue: 1 87 1 3 92 11 22 0 1 1 0 2											

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PM Peak Hour Conditions																															
Level Of Service Computation Report																															
1997 HCM Operations Method (Future Volume Alternative)																															
Intersection #7 Washington St./Ave. 50																															
Cycle (sec): 99 Critical Vol./Cap. (X): 0.877																															
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 47.3																															
Optimal Cycle: 99 Level Of Service: D																															
Approach: North Bound South Bound East Bound West Bound																															
Movement: L - T - R L - T - R L - T - R L - T - R																															
Control: Protected Protected Protected Protected																															
Rights: Include Ovl Include Include																															
Min. Green: 10 25 25 10 25 25 10 25 25 10 25 25																															
Lanes: 1 0 3 0 1 2 0 3 0 1 1 0 2 0 1 1 0 2 0 1																															
Volume Module:																															
Base Vol: 142 1029 194 289 1177 522 536 526 134 207 468 382																															
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00																															
Initial Bse: 142 1029 194 289 1177 522 536 526 134 207 468 382																															
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0																															
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0																															
Initial Fut: 142 1029 194 289 1177 522 536 526 134 207 468 382																															
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00																															
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95																															
PHF Volume: 149 1083 204 304 1239 549 564 554 141 218 493 402																															
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0																															
Reduced Vol: 149 1083 204 304 1239 549 564 554 141 218 493 402																															
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00																															
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00																															
Final Vol: 149 1083 204 304 1239 549 564 554 141 218 493 402																															
Saturation Flow Module:																															
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900																															
Adjustment: 0.95 0.91 0.85 0.92 0.91 0.85 0.95 0.95 0.85 0.95 0.95 0.85																															
Lanes: 1.00 3.00 1.00 2.00 3.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00																															
Final Sat.: 1805 5187 1615 3502 5187 1615 1805 3610 1615 1805 3610 1615																															
Capacity Analysis Module:																															
Vol./Sat: 0.08 0.21 0.13 0.09 0.24 0.34 0.31 0.15 0.09 0.12 0.14 0.25																															
Crit Moves: ****																															
Green/Cycle: 0.10 0.25 0.25 0.10 0.25 0.53 0.27 0.25 0.25 0.27 0.25 0.35																															
Volume/Cap: 0.82 0.83 0.50 0.86 0.95 0.65 1.15 0.61 0.35 0.44 0.54 0.70																															
Delay/Veh: 57.8 39.4 32.6 62.4 50.3 18.7 123.2 33.9 30.8 30.4 32.7 31.5																															
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00																															
AdjDel/Veh: 57.8 39.4 32.6 62.4 50.3 18.7 123.2 33.9 30.8 30.4 32.7 31.5																															
DesignQueue: 8 47 9 15 54 16 24 24 6 9 21 15																															

City of La Quinta
Post 2020 General Plan Recommended Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #8 Jefferson St./Country Club Dr.

Cycle (sec): 109 Critical Vol./Cap. (X): 0.888
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 45.7
Optimal Cycle: 109 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ignore			Include			Include		
Min. Green:	10	25	25	0	25	25	10	25	25	10	25	0
Lanes:	2	0	2	1	0	2	0	1	0	1	0	0

Volume Module:												
Base Vol:	393	1172	154	0	891	858	824	255	363	134	296	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	393	1172	154	0	891	0	824	255	363	134	296	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	393	1172	154	0	891	0	824	255	363	134	296	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	414	1234	162	0	938	0	867	268	382	141	312	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	414	1234	162	0	938	0	867	268	382	141	312	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	414	1234	162	0	938	0	867	268	382	141	312	0

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.89	0.89	1.00	0.95	1.00	0.92	1.00	0.85	0.95	1.00	1.00
Lanes:	2.00	2.65	0.35	1.00	2.00	1.00	2.00	1.00	1.00	1.00	1.00	0.00
Final Sat:	1502	4507	592	1900	3610	1900	1502	1900	1615	1805	1900	0

Capacity Analysis Module:												
Vol/Sat:	0.12	0.27	0.27	0.00	0.26	0.00	0.25	0.14	0.24	0.08	0.16	0.00
Crit Moves:	****			****			****			****		
Green/Cycle:	0.12	0.40	0.40	0.00	0.27	0.00	0.26	0.40	0.40	0.09	0.23	0.00
Volume/Cap:	2.95	0.69	0.69	0.00	0.95	0.00	0.95	0.35	0.59	0.85	0.72	0.00
Delay/Veh:	77.3	28.1	28.1	0.0	56.1	0.0	57.8	23.2	27.3	80.9	44.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	77.3	28.1	28.1	0.0	56.1	0.0	57.8	23.2	27.3	80.9	44.3	0.0
DesignQueue:	23	48	6	0	44	0	41	10	15	8	15	0

City of La Quinta
Post 2020 General Plan Recommended Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #9 Jefferson St./Ave. 44

Cycle (sec): 99 Critical Vol./Cap. (X): 0.877
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 49.5
Optimal Cycle: 99 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	2	1	0	2	1	0	2	1	0	2

Volume Module:												
Base Vol:	69	1488	38	1	1194	241	226	747	183	91	1122	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	69	1488	38	1	1194	241	226	747	183	91	1122	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	69	1488	38	1	1194	241	226	747	183	91	1122	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	73	1566	40	1	1257	254	238	786	193	96	1181	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	73	1566	40	1	1257	254	238	786	193	96	1181	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	73	1566	40	1	1257	254	238	786	193	96	1181	1

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.89	0.89	0.95	0.95	0.85	0.95	0.95	0.85
Lanes:	1.00	2.93	0.07	1.00	2.50	0.50	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat:	1805	5038	129	1805	4207	850	1805	3610	1615	1805	3610	1615

Capacity Analysis Module:												
Vol/Sat:	0.34	0.31	0.31	0.00	0.30	0.30	0.13	0.22	0.12	0.05	0.33	0.00
Crit Moves:	****			****			****			****		
Green/Cycle:	0.10	0.31	0.31	0.10	0.31	0.31	0.13	0.33	0.33	0.13	0.33	0.33
Volume/Cap:	0.40	0.99	0.99	0.01	0.95	0.95	0.99	0.66	0.36	0.40	0.99	0.00
Delay/Veh:	43.1	53.7	53.7	40.0	46.1	46.1	97.9	29.7	25.6	40.5	56.5	22.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.1	53.7	53.7	40.0	46.1	46.1	97.9	29.7	25.6	40.5	56.5	22.2
DesignQueue:	4	64	2	0	51	10	12	31	7	5	47	0

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1997 HCM Operations Method (Future Volume Alternative)																									
Intersection #10 Jefferson St./Miles Ave.																									

Cycle (sec):		102		Critical Vol./Cap. (X):								0.880													
Loss Time (sec):		12 (Y+R = 4 sec)		Average Delay (sec/veh):								43.7													
Optimal Cycle:		102		Level Of Service:								D													

Approach:		North Bound				South Bound				East Bound				West Bound											
Movement:		L - T - R				L - T - R				L - T - R				L - T - R											

Control:		Protected				Protected				Protected				Protected											
Rights:		Include				Include				Include				Ignore											
Min. Green:		10		25		25		10		25		25		10		25		25							
Lanes:		1		0		2		1		0		1		0		1		0							

Volume Module:																									
Base Vol:		278		1188		23		143		1239		87		262		473		82		80		341		144	
Growth Adj:		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		0.00	
Initial Bse:		278		1188		23		143		1239		87		262		473		82		80		341		0	
Added Vol:		0		0		0		0		0		0		0		0		0		0		0		0	
PasserByVol:		0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:		278		1188		23		143		1239		87		262		473		82		80		341		0	
User Adj:		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		0.00	
PHF Adj:		0.95		0.95		0.95		0.95		0.95		0.95		0.95		0.95		0.95		0.95		0.95		0.00	
PHF Volume:		293		1251		24		151		1304		92		276		498		86		84		359		0	
Reducd Vol:		0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:		293		1251		24		151		1304		92		276		498		86		84		359		0	
PCE Adj:		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		0.00	
MLF Adj:		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		0.00	
Final Vol.:		293		1251		24		151		1304		92		276		498		86		84		359		0	

Saturation Flow Module:																									
Sat/Lane:		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Adjustment:		0.95		0.91		0.91		0.95		0.90		0.90		0.95		1.00		0.85		0.95		1.00		1.00	
Lanes:		1.00		2.94		0.06		1.00		2.80		0.20		1.00		1.00		1.00		1.00		1.00		1.00	
Final Sat.:		1805		5074		97		1805		4797		338		1805		1900		1615		1805		1900		1900	

Capacity Analysis Module:																									
Vol/Sat:		0.16		0.25		0.25		0.08		0.27		0.27		0.15		0.26		0.05		0.05		0.19		0.00	
Crit Moves:		****		****		****		****		****		****		****		****		****		****		****		****	
Green/Cycle:		0.18		0.37		0.37		0.10		0.30		0.30		0.17		0.31		0.31		0.10		0.25		0.00	
Volume/Cap:		0.92		0.66		0.66		0.85		0.92		0.92		0.92		0.84		0.17		0.47		0.77		0.00	
Delay/Veh:		72.2		27.5		27.5		76.1		44.4		44.4		74.1		42.7		25.6		45.5		43.6		0.0	
User DelAdj:		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
AdjDel/Veh:		72.2		27.5		27.5		76.1		44.4		44.4		74.1		42.7		25.6		45.5		43.6		0.0	
DesignQueue:		14		47		1		8		56		4		14		21		3		4		16		0	

Default Scenario		Tue Aug 29, 2000 17:05:38										Page 12-1	
City of La Quinta													
Post 2020 General Plan Recommended Alternative													
PM Peak Hour Conditions													
Level Of Service Computation Report													
1997 HCM Operations Method (Future Volume Alternative)													

Intersection #11 Jefferson St./Hwy. 111													

Cycle (sec):		82		Critical Vol./Cap. (X):								0.714	
Loss Time (sec):		12 (Y+R = 4 sec)		Average Delay (sec/veh):								36.2	
Optimal Cycle:		82		Level Of Service:								D	

Approach:		North Bound			South Bound			East Bound			West Bound		
Movement:		L - T - R			L - T - R			L - T - R			L - T - R		

Control:		Protected			Protected			Protected			Protected		
Rights:		Include			Include			Include			Include		
Min. Green:		10 25 25			10 25 25			10 25 25			10 25 25		
Lanes:		2 0 3 0 1			2 0 3 0 1			2 0 3 0 1			2 0 3 0 1		

Volume Module:													
Base Vol:		78 1042 288			136 1054 122			170 1412 208			320 1508 181		
Growth Adj:		1.00 1.00 1.00			1.00 1.00 1.00			1.00 1.00 1.00			1.00 1.00 1.00		
Initial Bse:		78 1042 288			136 1054 122			170 1412 208			320 1508 181		
Added Vol:		0 0 0			0 0 0			0 0 0			0 0 0		
PasserByVol:		0 0 0			0 0 0			0 0 0			0 0 0		
Initial Fut:		78 1042 288			136 1054 122			170 1412 208			320 1508 181		
User Adj:		1.00 1.00 1.00			1.00 1.00 1.00			1.00 1.00 1.00			1.00 1.00 1.00		
PHF Adj:		0.95 0.95 0.95			0.95 0.95 0.95			0.95 0.95 0.95			0.95 0.95 0.95		
PHF Volume:		82 1097 303			143 1109 128			179 1486 219			337 1587 191		
Reduct Vol:		0 0 0			0 0 0			0 0 0			0 0 0		
Reduced Vol:		82 1097 303			143 1109 128			179 1486 219			337 1587 191		
PCE Adj:		1.00 1.00 1.00			1.00 1.00 1.00			1.00 1.00 1.00			1.00 1.00 1.00		
MLF Adj:		1.00 1.00 1.00			1.00 1.00 1.00			1.00 1.00 1.00			1.00 1.00 1.00		
Final Vol.:		82 1097 303			143 1109 128			179 1486 219			337 1587 191		

Saturation Flow Module:													
Sat/Lane:		1900 1900 1900			1900 1900 1900			1900 1900 1900			1900 1900 1900		
Adjustment:		0.92 0.91 0.85			0.92 0.91 0.85			0.92 0.91 0.85			0.92 0.91 0.85		
Lanes:		2.00 3.00 1.00			2.00 3.00 1.00			2.00 3.00 1.00			2.00 3.00 1.00		
Final Sat.:		3502 5187 1615			3502 5187 1615			3502 5187 1615			3502 5187 1615		

Capacity Analysis Module:													
Vol/Sat:		0.02 0.21 0.19			0.04 0.21 0.08			0.05 0.29 0.14			0.10 0.31 0.12		
Crit Moves:		****			****			****			****		
Green/Cycle:		0.12 0.30 0.30			0.12 0.30 0.30			0.12 0.30 0.30			0.12 0.30 0.30		
Volume/Cap:		0.19 0.69 0.62			0.33 0.70 0.26			0.42 0.94 0.44			0.79 1.00 0.39		
Delay/Veh:		32.6 26.5 26.7			33.4 26.6 21.8			34.0 39.1 23.6			44.5 52.0 23.0		
User DelAdj:		1.00 1.00 1.00			1.00 1.00 1.00			1.00 1.00 1.00			1.00 1.00 1.00		
AdjDel/Veh:		32.6 26.5 26.7			33.4 26.6 21.8			34.0 39.1 23.6			44.5 52.0 23.0		
DesignQueue:		3 37 10			6 37 4			7 51 7			14 54 6		

City of La Quinta
Post 2020 General Plan Recommended Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #12 Jefferson St./Ave. 48

Cycle (sec): 120 Critical Vol./Cap. (X): 0.911
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 44.1
Optimal Cycle: 120 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Ovl	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 2 1 0	1 0 2 1 0	1 0 2 0 1	2 0 1 1 0

Volume Module:
Base Vol: 555 1077 105 72 1403 177 117 622 556 45 463 278
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 555 1077 105 72 1403 177 117 622 556 45 463 278
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 529 1134 111 76 1477 186 123 655 585 47 487 293
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 529 1134 111 76 1477 186 123 655 585 47 487 293
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 529 1134 111 76 1477 186 123 655 585 47 487 293

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 0.90 0.90 0.95 0.89 0.89 0.95 0.95 0.85 0.92 0.90 0.90
Lanes: 2.00 2.73 0.27 1.00 2.66 0.34 1.00 2.00 1.00 2.00 1.25 0.75
Final Sat.: 3502 4663 456 1805 4529 570 1805 3610 1615 3502 2128 1280

Capacity Analysis Module:
Vol/Sat: 0.20 0.24 0.24 0.04 0.33 0.33 0.07 0.18 0.36 0.01 0.23 0.23
Crit Moves: ****
Green/Cycle: 0.21 0.48 0.48 0.08 0.35 0.35 0.08 0.24 0.45 0.09 0.25 0.25
Volume/Cap: 0.92 0.50 0.50 0.51 0.92 0.92 0.82 0.77 0.80 0.14 0.92 0.92
Delay/Veh: 52.8 21.2 21.2 55.4 45.3 45.3 82.4 46.8 34.8 50.0 59.0 59.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 52.8 21.2 21.2 55.4 45.3 45.3 82.4 46.8 34.8 50.0 59.0 59.0
DesignQueue: 38 41 4 5 69 9 8 35 23 3 26 16

City of La Quinta
Post 2020 General Plan Recommended Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #13 Jefferson St./Ave. 50

Cycle (sec): 97 Critical Vol./Cap. (X): 0.824
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 42.7
Optimal Cycle: 97 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Split Phase	Split Phase
Rights:	Include	Ovl	Include	Include
Min. Green:	10 25 25	10 25 25	25 25 25	25 25 25
Lanes:	2 0 3 0 1	2 0 3 0 1	1 1 1 0 1	1 1 1 0 1

Volume Module:
Base Vol: 89 1033 88 396 970 426 476 580 103 76 629 147
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 89 1033 88 396 970 426 476 580 103 76 629 147
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 89 1033 88 396 970 426 476 580 103 76 629 147
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 94 1087 93 417 1021 448 501 611 108 80 662 155
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 94 1087 93 417 1021 448 501 611 108 80 662 155
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 94 1087 93 417 1021 448 501 611 108 80 662 155

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 0.91 0.85 0.92 0.91 0.85 0.90 0.95 0.85 0.90 0.95 0.85
Lanes: 2.00 3.00 1.00 2.00 3.00 1.00 1.39 1.61 1.00 1.00 2.00 1.00
Final Sat.: 3502 5187 1615 3502 5187 1615 2383 2906 1615 1715 3610 1615

Capacity Analysis Module:
Vol/Sat: 0.23 0.21 0.06 0.12 0.20 0.28 0.21 0.21 0.07 0.05 0.18 0.10
Crit Moves: ****
Green/Cycle: 0.10 0.26 0.26 0.10 0.26 0.52 0.26 0.26 0.26 0.26 0.26 0.26
Volume/Cap: 0.26 0.81 0.22 1.16 0.76 0.54 0.82 0.82 0.26 0.18 0.71 0.37
Delay/Veh: 40.5 37.7 28.6 140.1 35.9 16.5 37.8 37.8 29.0 28.1 35.0 30.1
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 40.5 37.7 28.6 140.1 35.9 16.5 37.8 37.8 29.0 28.1 35.0 30.1
DesignQueue: 5 46 4 21 43 12 21 26 4 3 28 6

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City of La Quinta												
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Level Of Service Computation Report												
1997 HCM Operations Method (Future Volume Alternative)												

Intersection #15 Madison St. Ave. 50												

Cycle (sec):	120	Critical Vol./Cap. (X):				0.918						
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):				49.8						
Optimal Cycle:	120	Level Of Service:				D						

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
----- ----- ----- -----												
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	1	1	0	1	1	0	1	0	1	1
----- ----- ----- -----												
Volume Module:												
Base Vol:	37	660	80	388	680	124	173	559	230	100	617	296
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	37	660	80	388	680	124	173	559	230	100	617	296
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	37	660	80	388	680	124	173	559	230	100	617	296
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	39	695	84	408	716	131	182	588	242	105	649	312
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	39	695	84	408	716	131	182	588	242	105	649	312
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	39	695	84	408	716	131	182	588	242	105	649	312
----- ----- ----- -----												
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.93	0.93	0.95	0.91	0.91	0.95	0.90	0.90
Lanes:	1.00	1.78	0.22	1.00	1.69	0.31	1.00	1.42	0.58	1.00	1.35	0.65
Final Sat:	1805	3169	383	1805	2981	545	1805	2445	1006	1805	2319	1115
----- ----- ----- -----												
Capacity Analysis Module:												
Vol/Sat:	0.02	0.22	0.22	0.23	0.24	0.24	0.10	0.24	0.24	0.06	0.28	0.28
Crit Moves:	****			****			****			****		
Green/Cycle:	0.08	0.24	0.24	0.25	0.40	0.40	0.11	0.33	0.33	0.08	0.30	0.30
Volume/Cap:	0.26	0.92	0.92	0.92	0.60	0.60	0.92	0.73	0.73	0.70	0.92	0.92
Delay/Veh:	52.4	59.2	59.2	67.9	29.0	29.0	94.4	37.7	37.7	67.0	52.7	52.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	52.4	59.2	59.2	67.9	29.0	29.0	94.4	37.7	37.7	67.0	52.7	52.7
DesignQueue:	2	37	5	22	30	6	11	28	11	7	32	15

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Level Of Service Computation Report												
1997 HCM Operations Method (Future Volume Alternative)												

Intersection #16 Madison St./Ave. 52												

Cycle (sec):	82	Critical Vol./Cap. (X):								0.824		
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):								45.2		
Optimal Cycle:	82	Level Of Service:								D		

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	1 1 0	1	0	1 1 0	1	0	1 1 0	1	0	1 1 0

Volume Module:												
Base Vol:	208	559	51	127	708	119	76	885	187	25	705	102
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	208	559	51	127	708	119	76	885	187	25	705	102
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	208	559	51	127	708	119	76	885	187	25	705	102
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	219	588	54	134	745	125	80	932	197	26	742	107
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	219	588	54	134	745	125	80	932	197	26	742	107
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	219	588	54	134	745	125	80	932	197	26	742	107

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.93	0.93	0.95	0.93	0.93	0.95	0.93	0.93
Lanes:	1.00	1.83	0.17	1.00	1.71	0.29	1.00	1.65	0.35	1.00	1.75	0.25
Final Sat:	1805	3263	300	1805	3023	507	1805	2903	614	1805	3095	446

Capacity Analysis Module:												
Vol/Sat:	0.12	0.18	0.18	0.07	0.25	0.25	0.04	0.32	0.32	0.01	0.24	0.24
Crit Moves:	****			****			****			****		
Green/Cycle:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30
Volume/Cap:	0.99	0.59	0.59	0.61	0.81	0.81	0.36	1.05	1.05	0.12	0.79	0.79
Delay/Veh:	95.1	25.0	25.0	39.0	30.9	30.9	34.1	71.1	71.1	32.3	30.0	30.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	95.1	25.0	25.0	39.0	30.9	30.9	34.1	71.1	71.1	32.3	30.0	30.0
DesignQueue:	9	19	2	5	25	4	3	32	7	1	25	4

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City of La Quinta													
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PM Peak Hour Conditions													
Level Of Service Computation Report													
1997 HCM Operations Method (Future Volume Alternative)													
Intersection #17 Jackson St./Airport Blvd.													
Cycle (sec):	90			Critical Vol./Cap. (X):						0.830			
Loss Time (sec):	12 (Y+R = 4 sec)			Average Delay (sec/veh):						50.9			
Optimal Cycle:	90			Level Of Service:						D			
Approach: North Bound South Bound East Bound West Bound													
Movement:	L - T - R			L - T - R			L - T - R			L - T - R			
Control:	Protected			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25	
Lanes:	1	0	1	1	0	1	1	0	1	0	1	1	0
Volume Module:													
Base Vol:	286	437	133	360	790	161	64	479	237	201	592	215	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	286	437	133	360	790	161	64	479	237	201	592	215	
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0	
Initial Fut:	286	437	133	360	790	161	64	479	237	201	592	215	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
PHF Volume:	301	460	140	379	832	169	67	504	249	212	623	226	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	301	460	140	379	832	169	67	504	249	212	623	226	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Final Vol.:	301	460	140	379	832	169	67	504	249	212	623	226	
Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.92	0.92	0.95	0.93	0.93	0.95	0.90	0.90	0.95	0.91	0.91	
Lanes:	1.00	1.53	0.47	1.00	1.66	0.34	1.00	1.34	0.66	1.00	1.47	0.53	
Final Sat.:	1805	2671	813	1805	2926	594	1805	2295	1134	1805	2543	923	
Capacity Analysis Module:													
Vol/Sat:	0.17	0.17	0.17	0.21	0.28	0.28	0.04	0.22	0.22	0.12	0.24	0.24	
Crit Moves:	0.16	0.28	0.28	0.20	0.30	0.30	0.11	0.28	0.28	0.11	0.28	0.28	
Green/Cycle:	0.16	0.28	0.28	0.20	0.30	0.30	0.11	0.28	0.28	0.11	0.28	0.28	
Volume/Cap:	0.95	0.62	0.62	1.05	0.95	0.95	0.33	0.79	0.79	1.05	0.88	0.88	
Delay/Veh:	72.7	29.6	29.6	97.9	46.9	46.9	37.9	34.6	34.6	117.9	40.5	40.5	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	72.7	29.6	29.6	97.9	46.9	46.9	37.9	34.6	34.6	117.9	40.5	40.5	
DesignQueue:	13	17	5	16	31	6	3	19	9	10	24	9	

Default Scenario	Tue Aug 29, 2000 17:05:38										Page 19-1	
City of La Quinta												
Post 2020 General Plan Recommended Alternative												
PM Peak Hour Conditions												

Level Of Service Computation Report												
1997 HCM Operations Method (Future Volume Alternative)												

Intersection #18 Harrison St./Airport Blvd.												

Cycle (sec):	82	Critical Vol./Cap. (X):								0.803		
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):								38.6		
Optimal Cycle:	82	Level Of Service:								D		

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	2	1	0	2	1	0	1	0	2	1

Volume Module:												
Base Vol:	57	1093	118	3	1180	232	197	498	52	207	796	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	67	1093	118	3	1180	232	197	498	52	207	796	16
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	67	1093	118	3	1180	232	197	498	52	207	796	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	71	1151	124	3	1242	244	207	524	55	218	838	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	71	1151	124	3	1242	244	207	524	55	218	838	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	71	1151	124	3	1242	244	207	524	55	218	838	17

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.95	0.89	0.89	0.95	0.94	0.94	0.95	0.95	0.95
Lanes:	1.00	2.71	0.29	1.00	2.51	0.49	1.00	1.81	0.19	1.00	1.96	0.04
Final Sat.:	1805	4612	497	1805	4227	830	1805	3221	338	1805	3528	72

Capacity Analysis Module:												
Vol/Sat:	0.74	0.25	0.25	0.00	0.29	0.29	0.11	0.16	0.16	0.12	0.24	0.24
Crit Moves:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30
Green/Cycle:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30
Volume/Cap:	0.32	0.82	0.82	0.01	0.96	0.96	0.94	0.53	0.53	0.99	0.78	0.78
Delay/Veh:	33.8	29.9	29.9	31.7	43.2	43.2	79.8	24.2	24.2	93.7	29.6	29.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.8	29.9	29.9	31.7	43.2	43.2	79.8	24.2	24.2	93.7	29.6	29.6
DesignQueue:	3	39	4	0	42	8	9	17	2	9	28	1

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City of La Quinta												
Post 2020 General Plan Recommended Alternative												
PM Peak Hour Conditions												

Level Of Service Computation Report												
1997 HCM Operations Method (Future Volume Alternative)												

Intersection #19 Grapefruit Blvd./Airport Blvd.												
Cycle (sec):	111	Critical Vol./Cap. (X):								0.891		
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):								49.0		
Optimal Cycle:	111	Level Of Service:								D		

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	2	0	1	1	0	1	1	0	3	0	1	2

Volume Module:												
Base Vol:	325	694	562	79	644	277	257	1007	261	460	945	59
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	325	694	562	79	644	277	257	1007	261	460	945	59
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	325	694	562	79	644	277	257	1007	261	460	945	59
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	342	731	592	83	678	292	271	1060	275	484	995	62
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	342	731	592	83	678	292	271	1060	275	484	995	62
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	342	731	592	83	678	292	271	1060	275	484	995	62

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.89	0.89	0.95	0.91	0.91	0.95	0.91	0.85	0.92	0.90	0.90
Lanes:	2.00	1.11	0.89	1.00	1.40	0.60	1.00	3.00	1.00	2.00	2.82	0.18
Final Sat.:	3502	1861	1507	1805	2410	1038	1805	5187	1615	3502	4839	302

Capacity Analysis Module:												
Vol/Sat:	0.10	0.39	0.39	0.05	0.28	0.28	0.15	0.20	0.17	0.14	0.21	0.21
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.13	0.42	0.42	0.09	0.38	0.38	0.16	0.23	0.23	0.16	0.23	0.23
Volume/Cap:	2.75	0.94	0.94	0.51	0.75	0.75	0.94	0.91	0.76	0.87	0.91	0.91
Delay/Veh:	53.1	43.7	43.7	50.9	32.5	32.5	83.8	52.2	48.9	59.0	52.9	52.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	53.1	43.7	43.7	50.9	32.5	32.5	83.8	52.2	48.9	59.0	52.9	52.9
DesignQueue:	19	29	23	5	28	12	15	53	14	26	50	3

Default Scenario	Tue Aug 29, 2000 17:05:38										Page 21-1	
City of La Quinta												
Post 2020 General Plan Recommended Alternative												
PM Peak Hour Conditions												
Level Of Service Computation Report												
1997 HCM Operations Method (Future Volume Alternative)												
Intersection #20 Grapefruit Blvd./Ave. 62												
Cycle (sec):	90			Critical Vol./Cap. (X):						0.654		
Loss Time (sec):	12 (Y+R = 4 sec)			Average Delay (sec/veh):						46.4		
Optimal Cycle:	90			Level Of Service:						D		
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	1	1	0	1	1	0	1	1	0	1
Volume Module:												
Base Vol:	143	300	87	150	445	68	49	83	160	379	134	116
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	143	300	87	150	445	68	49	83	160	379	134	116
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	143	300	87	150	445	68	49	83	160	379	134	116
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	151	316	92	158	468	72	52	87	168	399	141	122
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	151	316	92	158	468	72	52	87	168	399	141	122
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	151	316	92	158	468	72	52	87	168	399	141	122
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.92	0.92	0.95	0.93	0.93	0.95	0.95	0.81	0.95	0.88	0.88
Lanes:	1.00	1.55	0.45	1.00	1.73	0.27	1.00	1.00	1.00	1.00	1.07	0.93
Final Sat.:	1805	2701	786	1805	3066	472	1805	1805	1534	1805	1800	1557
Capacity Analysis Module:												
Vol/Sat:	0.08	0.12	0.12	0.09	0.15	0.15	0.03	0.05	0.11	0.22	0.08	0.08
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.11	0.28	0.28	0.11	0.28	0.28	0.14	0.28	0.28	0.20	0.34	0.34
Volume/Cap:	0.75	0.42	0.42	0.79	0.55	0.55	0.21	0.17	0.39	1.11	0.23	0.23
Delay/Veh:	53.6	26.9	26.9	57.5	28.4	28.4	35.0	24.7	26.8	114.8	21.3	21.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	53.6	26.9	26.9	57.5	28.4	28.4	35.0	24.7	26.8	114.8	21.3	21.3
DesignQueue:	7	12	3	7	18	3	2	3	6	17	5	

City of La Quinta
Post 2020 Existing General Plan
AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #: Washington St./Country Club Dr.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.800
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 50.2
Optimal Cycle: 100 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control Rights:	Protected Include			Protected Cvl			Protected Include			Protected Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	1	0	1	0	2	0	1	1	0	1

Volume Module:

Base Vol:	111	1246	9	129	1279	599	1064	238	98	11	361	36
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	111	1246	9	129	1279	599	1064	238	98	11	361	36
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	117	1312	9	136	1346	631	1120	251	103	12	380	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	117	1312	9	136	1346	631	1120	251	103	12	380	38
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	117	1312	9	136	1346	631	1120	251	103	12	380	38

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.91	0.85	0.92	0.91	0.91	0.95	0.94	0.94
Lanes:	1.00	1.97	0.03	1.00	4.00	1.00	2.00	1.42	0.58	1.00	1.82	0.18
Final Sat:	1205	6862	47	1805	6916	1615	3502	2447	1004	1805	3236	324

Capacity Analysis Module:

Vol/Sat:	0.06	0.19	0.19	0.08	0.19	0.39	0.32	0.10	0.10	0.01	0.12	0.12
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.10	0.25	0.25	0.10	0.25	0.53	0.28	0.38	0.38	0.15	0.25	0.25
Volume/Cap:	0.65	0.76	0.76	0.75	0.78	0.74	1.14	0.27	0.27	0.04	0.47	0.47
Delay/Veh:	51.3	36.9	36.9	60.1	37.2	21.5	112.4	21.6	21.6	36.3	32.3	32.3
User Del Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Del/Veh:	51.3	36.9	36.9	60.1	37.2	21.5	112.4	21.6	21.6	36.3	32.3	32.3
Design Queue:	5	57	0	7	59	18	49	9	4	1	16	2

APPENDIX E

POST 2020 EXISTING GENERAL PLAN INTERSECTION ANALYSIS WORKSHEETS

City of La Quinta
Post 2020 Existing General Plan
AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #2 Washington St./Hovley Ln.-42nd Ave.

Cycle (sec): 82 Critical Vol./Cap. (X): 0.724
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 33.5
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	2	1	0	2	1	0	2	1	0	2

Volume Module:

Base Vol:	165	1095	62	65	1220	110	202	382	187	60	352	82
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Pse:	165	1095	62	65	1220	110	202	382	187	60	352	82
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	174	1153	65	68	1284	116	213	402	197	63	371	86
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	174	1153	65	68	1284	116	213	402	197	63	371	86
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	174	1153	65	68	1284	116	213	402	197	63	371	86

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.95	0.90	0.90	0.95	0.90	0.90	0.95	0.92	0.92
Lanes:	1.00	2.84	0.16	1.00	2.75	0.25	1.00	1.34	0.66	1.00	1.62	0.38
Final Sat:	1805	4871	275	1805	4700	425	1805	2304	1129	1805	2849	660

Capacity Analysis Module:

Vol/Sat:	0.10	0.24	0.24	0.04	0.27	0.27	0.12	0.17	0.17	0.03	0.13	0.13
Left Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30
Volume/Cap:	0.79	0.78	0.78	0.31	0.90	0.90	0.97	0.57	0.57	0.29	0.43	0.43
Delay/Veh:	32.3	28.5	28.5	33.6	34.4	34.4	87.1	24.8	24.8	33.5	23.1	23.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.3	28.5	28.5	33.6	34.4	34.4	87.1	24.8	24.8	33.5	23.1	23.1
DesignQueue:	7	39	2	3	43	4	9	13	7	3	12	3

City of La Quinta
Post 2020 Existing General Plan
AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #3 Washington St./Fred Waring Dr.

Cycle (sec): 85 Critical Vol./Cap. (X): 0.729
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 43.9
Optimal Cycle: 85 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	2	0	2	1	0	3	0	1	1	0	2	1

Volume Module:

Base Vol:	682	985	46	33	1210	119	149	827	596	37	722	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Initial Pse:	682	985	46	33	1210	119	149	827	596	37	722	41
User Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	648	936	44	31	1150	113	142	786	0	35	686	39
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	648	936	44	31	1150	113	142	786	0	35	686	39
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol:	648	936	44	31	1150	113	142	786	0	35	686	39

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.90	0.90	0.95	0.91	0.85	0.95	0.91	1.00	0.95	0.90	0.90
Lanes:	2.00	2.87	0.13	1.00	3.00	1.00	1.00	3.00	1.00	1.00	2.84	0.16
Final Sat:	1802	4919	231	1805	5187	1615	1805	5187	1900	1805	4869	277

Capacity Analysis Module:

Vol/Sat:	0.19	0.19	0.19	0.02	0.22	0.07	0.08	0.15	0.00	0.02	0.14	0.14
Left Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.15	0.32	0.32	0.13	0.29	0.29	0.12	0.29	0.00	0.12	0.29	0.29
Volume/Cap:	0.21	0.60	0.60	0.13	0.75	0.24	0.67	0.52	0.00	0.16	0.48	0.48
Delay/Veh:	147.0	24.9	24.9	33.2	29.4	23.0	43.9	25.3	0.0	34.1	24.9	24.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.0	1.00	1.00	1.00
AdjDel/Veh:	147.0	24.9	24.9	33.2	29.4	23.0	43.9	25.3	0.0	34.1	24.9	24.9
DesignQueue:	27	32	1	1	40	4	6	27	0	1	24	1

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #4 Washington St./Miles Ave.

Cycle (sec): 85 Critical Vol./Cap. (X): 0.536
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 40.3
Optimal Cycle: 85 Level Of Service: D

Approach	North Bound			South Bound			East Bound			West Bound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	2	0	2	1	0	2	0	2	1	0	1	0

Volume Module:

Base Vol:	15	1481	46	243	1612	3	3	264	14	40	212	192
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	1481	46	243	1612	3	3	264	14	40	212	192
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	16	1559	48	256	1697	3	3	278	15	42	223	202
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	16	1559	48	256	1697	3	3	278	15	42	223	202
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	16	1559	48	256	1697	3	3	278	15	42	223	202

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.91	0.92	0.91	0.91	0.95	0.94	0.94	0.95	0.88	0.88
Lanes:	2.00	2.51	0.09	2.00	2.99	0.01	1.00	1.90	0.10	1.00	1.05	0.95
Final Sat:	1802	1802	154	1802	1802	9	1805	1805	183	1805	1805	1594

Capacity Analysis Module:

Vol/Sat:	0.00	0.31	0.31	0.07	0.33	0.33	0.00	0.08	0.08	0.02	0.13	0.13
Crit Moves:	****											
Green/Cycle:	0.12	0.33	0.33	0.12	0.33	0.33	0.12	0.29	0.29	0.12	0.29	0.29
Volume/Cap:	0.04	0.94	0.94	0.62	0.99	0.99	0.01	0.28	0.28	0.20	0.43	0.43
Delay/Veh:	33.3	39.0	39.0	38.6	48.9	48.9	33.2	23.2	23.2	34.3	24.6	24.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.3	39.0	39.0	38.6	48.9	48.9	33.2	23.2	23.2	34.3	24.6	24.6
DesignQueue:	1	53	2	11	58	0	0	9	1	2	8	7

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #5 Washington St./Hwy. 111.

Cycle (sec): 95 Critical Vol./Cap. (X): 0.866
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 54.0
Optimal Cycle: 95 Level Of Service: D

Approach	North Bound			South Bound			East Bound			West Bound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	2	0	3	1	0	2	0	3	1	0	1	0

Volume Module:

Base Vol:	104	999	6	469	991	88	114	1026	903	2	735	422
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	104	999	6	469	991	88	114	1026	903	2	735	422
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	99	1052	6	494	1043	93	120	1080	951	2	774	444
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	99	1052	6	494	1043	93	120	1080	951	2	774	444
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	99	1052	6	494	1043	93	120	1080	951	2	774	444

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.91	0.92	0.90	0.90	0.95	0.91	0.85	0.95	0.91	0.85
Lanes:	2.00	3.98	0.02	2.00	3.67	0.33	1.00	4.00	1.00	1.00	3.00	1.00
Final Sat:	1802	1802	154	1802	1802	559	1805	1805	1615	1805	1805	1615

Capacity Analysis Module:

Vol/Sat:	0.27	0.15	0.15	0.14	0.17	0.17	0.07	0.16	0.59	0.00	0.15	0.27
Crit Moves:	****											
Green/Cycle:	0.23	0.26	0.26	0.23	0.26	0.26	0.11	0.27	0.51	0.11	0.27	0.50
Volume/Cap:	0.17	0.58	0.58	0.60	0.63	0.63	0.62	0.57	1.17	0.01	0.55	0.55
Delay/Veh:	124.1	30.9	30.9	33.8	31.7	31.7	46.4	30.3	111.1	38.1	30.3	17.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	124.1	30.9	30.9	33.8	31.7	31.7	46.4	30.3	111.1	38.1	30.3	17.0
DesignQueue:	41	42	0	21	42	4	6	43	29	0	31	12

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #6 Washington St./Eisenhower Dr.

Cycle (sec): 105 Critical Vol./Cap. (X): 0.429
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 41.6
Optimal Cycle: 105 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Split Phase	Split Phase
Rights:	Include	Ovl	Include	Include
Min. Green:	10 25 25	10 25 25	25 25 25	25 25 25
Lanes:	1 0 3 1 0	1 0 3 0 1	2 0 1 1 0	0 0 1 1 0 0

Volume Module:
Base Vol: 8 1564 14 38 1506 60 86 1 20 12 1 49
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 8 1564 14 38 1506 60 86 1 20 12 1 49
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 8 1646 15 40 1585 63 91 1 21 13 1 52
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 8 1646 15 40 1585 63 91 1 21 13 1 52
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol: 8 1646 15 40 1585 63 91 1 21 13 1 52

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.91 0.91 0.95 0.91 0.85 0.92 0.95 0.81 0.79 0.79 0.79
Lanes: 1.00 3.96 0.04 1.00 3.00 1.00 2.00 1.00 1.00 0.20 0.01 0.79
Final Sat: 1805 6647 62 1805 5187 1615 3502 1805 1534 294 23 1177

Capacity Analysis Module:
Vol/Sat: 0.00 0.24 0.24 0.02 0.31 0.04 0.03 0.00 0.01 0.04 0.04 0.04
Crit Moves: ****
Green/Cycle: 0.10 0.31 0.31 0.10 0.31 0.55 0.24 0.24 0.24 0.24 0.24 0.24
Volume/Cap: 0.05 0.76 0.76 0.23 0.97 0.07 0.11 0.00 0.06 0.19 0.19 0.19
Delay/Veh: 45.3 34.2 34.2 44.6 51.7 11.0 31.3 30.5 31.0 32.1 32.1 32.1
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 45.3 34.2 34.2 44.6 51.7 11.0 31.3 30.5 31.0 32.1 32.1 32.1
DesignQueue: 0 70 1 2 68 2 4 0 1 1 0 2

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #7 Washington St./Ave. 50

Cycle (sec): 90 Critical Vol./Cap. (X): 0.669
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 37.6
Optimal Cycle: 90 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Ovl	Include	Ovl
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 3 0 1	2 0 3 0 1	1 0 2 0 1	1 0 2 0 1

Volume Module:
Base Vol: 67 911 239 275 796 454 390 278 62 194 292 259
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 67 911 239 275 796 454 390 278 62 194 292 259
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 71 959 252 289 838 478 411 293 65 204 307 273
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 71 959 252 289 838 478 411 293 65 204 307 273
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol: 71 959 252 289 838 478 411 293 65 204 307 273

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.91 0.85 0.92 0.91 0.85 0.95 0.95 0.85 0.95 0.95 0.85
Lanes: 1.00 3.00 1.00 2.00 3.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat: 1805 5187 1615 3502 5187 1615 1805 3610 1615 1805 3610 1615

Capacity Analysis Module:
Vol/Sat: 0.04 0.18 0.16 0.08 0.16 0.30 0.23 0.08 0.04 0.11 0.09 0.17
Crit Moves: ****
Green/Cycle: 0.11 0.28 0.28 0.11 0.28 0.48 0.20 0.28 0.28 0.20 0.28 0.39
Volume/Cap: 0.03 0.67 0.56 0.14 0.58 0.62 0.14 0.29 0.14 0.57 0.31 0.43
Delay/Veh: 38.1 30.0 29.4 46.3 28.6 19.0 126.5 25.7 24.6 34.5 25.8 20.7
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 38.1 30.0 29.4 46.3 28.6 19.0 126.5 25.7 24.6 34.5 25.8 20.7
DesignQueue: 3 36 9 13 31 13 17 11 2 8 11 9

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #3 Jefferson St./Country Club Dr.

Cycle (sec): 85 Critical Vol./Cap. (X): 0.609
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 47.7
Optimal Cycle: 85 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ignore			Include			Include		
Min. Green:	10	25	25	0	25	25	10	25	25	10	25	0
Lanes:	1	0	2	1	0	1	2	0	1	0	1	0

Volume Module:												
Base Vol:	131	961	121	0	525	513	613	93	275	109	210	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	131	961	121	0	525	0	613	93	275	109	210	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	124	912	127	0	553	0	645	98	289	115	221	0
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	124	912	127	0	553	0	645	98	289	115	221	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	124	912	127	0	553	0	645	98	289	115	221	0

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.89	0.89	1.00	0.95	1.00	0.92	1.00	0.85	0.95	1.00	1.00
Lanes:	0.00	2.67	0.33	1.00	2.00	1.00	2.00	1.00	1.00	1.00	0.00	0.00
Final Sat:	1772	1630	569	1900	3610	1900	3502	1900	1615	1805	1900	0

Capacity Analysis Module:												
Vol/Sat:	0.07	0.22	0.22	0.00	0.15	0.00	0.18	0.05	0.18	0.06	0.12	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.12	0.41	0.41	0.00	0.29	0.00	0.15	0.32	0.32	0.13	0.29	0.00
Volume/Cap:	0.59	0.54	0.54	0.00	0.52	0.00	1.20	0.16	0.56	0.50	0.40	0.00
Delay/Veh:	37.8	19.2	19.2	0.0	25.5	0.0	144.7	20.9	25.4	36.2	24.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.8	19.2	19.2	0.0	25.5	0.0	144.7	20.9	25.4	36.2	24.4	0.0
DesignQueue:	10	30	4	0	19	0	27	3	10	5	8	0

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #9 Jefferson St./Ave. 44

Cycle (sec): 82 Critical Vol./Cap. (X): 0.635
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 28.3
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	0	25	25	10	25	25	10	25	0
Lanes:	1	0	2	1	0	1	1	0	2	0	1	0

Volume Module:												
Base Vol:	55	1114	42	0	749	165	220	569	86	103	654	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	55	1114	42	0	749	165	220	569	86	103	654	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	58	1173	44	0	788	174	232	599	91	108	688	0
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	58	1173	44	0	788	174	232	599	91	108	688	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	58	1173	44	0	788	174	232	599	91	108	688	0

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	1.00	0.89	0.89	0.95	0.95	0.85	0.95	0.95	1.00
Lanes:	0.00	2.58	0.11	1.00	2.46	0.54	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat:	1805	1974	187	1900	1134	913	1805	3610	1615	1805	3610	1900

Capacity Analysis Module:												
Vol/Sat:	0.03	0.24	0.24	0.00	0.19	0.19	0.13	0.17	0.06	0.06	0.19	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.12	0.43	0.43	0.00	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.00
Volume/Cap:	0.26	0.55	0.55	0.00	0.63	0.63	1.05	0.54	0.18	0.49	0.63	0.00
Delay/Veh:	33.3	17.9	17.9	0.0	25.3	25.3	111.6	24.3	21.2	35.3	25.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.3	17.9	17.9	0.0	25.3	25.3	111.6	24.3	21.2	35.3	25.6	0.0
DesignQueue:	2	32	1	0	26	6	10	20	3	4	23	0

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #10 Jefferson St./Miles Ave.

Cycle (sec): 82 Critical Vol./Cap. (X): 0.570
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 26.7
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Ignore	Ignore
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 1 0 1	1 0 1 0 1

Volume Module:

Base Vol:	16 908 12	83 786 68	154 363 36	16 291 149
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	16 908 12	83 786 68	154 363 36	16 291 149
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	17 956 13	87 827 72	162 382 38	17 306 0
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	17 956 13	87 827 72	162 382 38	17 306 0
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	17 956 13	87 827 72	162 382 38	17 306 0

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.91 0.91	0.95 0.90 0.90	0.95 1.00 0.85	0.95 1.00 1.00
Lanes:	1.00 2.95 1.04	1.00 2.76 0.24	1.00 1.00 1.00	1.00 1.00 1.00
Final Sat:	1805 5107 59	1805 4714 410	1805 1900 1615	1805 1900 1900

Capacity Analysis Module:

Vol/Sat:	0.01 0.19 0.19	0.05 0.18 0.18	0.09 0.20 0.02	0.01 0.16 0.00
Crit Moves:	0.01 0.19 0.19	0.05 0.18 0.18	0.09 0.20 0.02	0.01 0.16 0.00
Green/Cycle:	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30
Volume/Cap:	0.08 0.61 0.61	0.40 0.58 0.58	0.74 0.66 0.08	0.08 0.53 0.00
Delay/Veh:	32.1 25.1 25.1	34.4 24.6 24.6	46.9 27.6 20.4	32.1 24.5 0.0
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	32.1 25.1 25.1	34.4 24.6 24.6	46.9 27.6 20.4	32.1 24.5 0.0
DesignQueue:	1 32 0	4 27 2	7 13 1	1 10 0

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #11 Jefferson St./Hwy. 111

Cycle (sec): 82 Critical Vol./Cap. (X): 0.720
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 29.5
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 3 0 1	2 0 3 0 1	2 0 3 0 1	2 0 3 0 1

Volume Module:

Base Vol:	33 590 379	169 547 122	130 1065 21	333 1295 172
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	33 590 379	169 547 122	130 1065 21	333 1295 172
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	35 621 399	178 576 128	137 1121 22	351 1363 181
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	35 621 399	178 576 128	137 1121 22	351 1363 181
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	35 621 399	178 576 128	137 1121 22	351 1363 181

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 0.91 0.85	0.92 0.91 0.85	0.92 0.91 0.85	0.92 0.91 0.85
Lanes:	2.00 3.00 1.00	2.00 3.00 1.00	2.00 3.00 1.00	2.00 3.00 1.00
Final Sat:	3502 5187 1615	3502 5187 1615	3502 5187 1615	3502 5187 1615

Capacity Analysis Module:

Vol/Sat:	0.01 0.12 0.25	0.05 0.11 0.08	0.04 0.22 0.01	0.10 0.26 0.11
Crit Moves:	0.01 0.12 0.25	0.05 0.11 0.08	0.04 0.22 0.01	0.10 0.26 0.11
Green/Cycle:	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30
Volume/Cap:	0.08 0.39 0.81	0.42 0.36 0.26	0.32 0.71 0.04	0.82 0.86 0.37
Delay/Veh:	32.0 22.7 36.1	34.0 22.4 21.8	33.3 26.8 20.1	47.2 32.0 22.8
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	32.0 22.7 36.1	34.0 22.4 21.8	33.3 26.8 20.1	47.2 32.0 22.8
DesignQueue:	1 20 13	7 19 4	8 37 1	14 46 6

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AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #12 Jefferson St./Ave. 48

Cycle (sec): 82 Critical Vol./Cap. (X): 0.675
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 51.6
Optimal Cycle: 82 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Ovl	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 2 1 0	1 0 2 1 0	1 0 2 0 1	2 0 1 1 0

Volume Module:

Base Vol:	547	812	24	16	697	129	159	398	381	81	484	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	547	812	24	16	697	129	159	398	381	81	484	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Vol:	576	855	25	17	734	136	167	419	401	85	509	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	576	855	25	17	734	136	167	419	401	85	509	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	576	855	25	17	734	136	167	419	401	85	509	21

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.91	0.95	0.89	0.89	0.95	0.95	0.85	0.92	0.94	0.94
Lanes:	1.00	2.00	1.00	1.00	2.00	0.47	1.00	2.00	1.00	2.00	1.92	0.08
Final Sat:	1702	1709	1709	1805	1709	792	1805	1610	1615	3502	3446	142

Capacity Analysis Module:

Vol/Sat:	0.16	0.17	0.17	0.01	0.17	0.17	0.09	0.12	0.25	0.02	0.15	0.15
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.43	0.12	0.30	0.30
Volume/Cap:	1.35	0.56	0.56	0.08	0.56	0.56	0.76	0.18	0.58	0.20	0.48	0.48
Delay/Veh:	207.9	24.3	24.3	32.1	24.4	24.4	49.0	22.6	19.2	32.6	23.6	23.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	207.9	24.3	24.3	32.1	24.4	24.4	49.0	22.6	19.2	32.6	23.6	23.6
DesignQueue:	24	28	1	1	24	4	7	14	11	3	17	1

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #13 Jefferson St./Ave. 50

Cycle (sec): 97 Critical Vol./Cap. (X): 0.456
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 29.8
Optimal Cycle: 97 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Split Phase	Split Phase
Rights:	Include	Ovl	Include	Include
Min. Green:	10 25 25	10 25 25	25 25 25	25 25 25
Lanes:	2 0 3 0 1	2 0 3 0 1	1 1 1 0 1	1 1 1 0 1

Volume Module:

Base Vol:	44	518	23	163	400	433	410	333	33	18	332	270
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	44	518	23	163	400	433	410	333	33	18	332	270
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Vol:	46	545	24	172	421	456	432	351	35	19	349	284
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	46	545	24	172	421	456	432	351	35	19	349	284
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	46	545	24	172	421	456	432	351	35	19	349	284

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.85	0.92	0.91	0.85	0.90	0.95	0.85	0.90	0.95	0.85
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	1.69	1.31	1.00	1.30	2.00	1.00
Final Sat:	1702	5187	1615	3502	5187	1615	2903	2359	1615	1715	3610	1615

Capacity Analysis Module:

Vol/Sat:	0.01	0.11	0.01	0.05	0.08	0.28	0.15	0.15	0.02	0.01	0.10	0.18
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.10	0.26	0.26	0.10	0.26	0.52	0.26	0.26	0.26	0.26	0.26	0.26
Volume/Cap:	0.13	0.41	0.06	0.48	0.31	0.55	0.58	0.58	0.08	0.04	0.38	0.68
Delay/Veh:	19.7	30.1	27.2	42.0	29.2	16.6	32.0	32.0	27.4	27.0	29.8	37.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.7	30.1	27.2	42.0	29.2	16.6	32.0	32.0	27.4	27.0	29.8	37.0
DesignQueue:	2	22	1	8	17	13	18	15	1	1	14	12

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Level Of Service Computation Report

1997 HCM Operations Method (Base Volume Alternative)

Intersection #15 Madison St. Ave. 50

Cycle (sec): 82 Critical Vol./Cap. (X): 0.749
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 50.1
Optimal Cycle: 82 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:
Base Vol: 13 695 81 296 409 23 41 468 9 46 513 187
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 13 695 81 296 409 23 41 468 9 46 513 187
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 14 732 85 312 431 24 43 493 9 48 540 197
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 14 732 85 312 431 24 43 493 9 48 540 197
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol: 14 732 85 312 431 24 43 493 9 48 540 197

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.93 0.93 0.95 0.94 0.94 0.95 0.95 0.95 0.95 0.91 0.91
Lanes: 1.00 1.79 0.21 1.00 1.89 0.11 1.00 1.96 0.04 1.00 1.47 0.53
Final Sat: 1805 3183 370 1805 3392 189 1805 3535 65 1805 2539 926

Capacity Analysis Module:
Vol/Sat: 0.01 0.23 0.23 0.17 0.13 0.13 0.02 0.14 0.14 0.03 0.21 0.21
Crit Moves: ****
Green/Cycle: 0.12 0.30 0.30 0.12 0.30 0.30 0.12 0.30 0.30 0.12 0.30 0.30
Volume/Cap: 0.06 0.75 0.75 1.42 0.42 0.42 0.20 0.46 0.46 0.22 0.70 0.70
Delay/Veh: 32.0 28.8 28.8 248.4 23.0 23.0 32.8 23.3 23.3 33.0 27.2 27.2
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 32.0 28.8 28.8 248.4 23.0 23.0 32.8 23.3 23.3 33.0 27.2 27.2
DesignQueue: 1 25 3 13 14 1 2 16 0 2 18 7

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Level Of Service Computation Report

1997 HCM Operations Method (Base Volume Alternative)

Intersection #16 Madison St./Ave. 52

Cycle (sec): 82 Critical Vol./Cap. (X): 0.506
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 25.8
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:
Base Vol: 152 534 27 1 396 38 86 477 20 37 418 126
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 152 534 27 1 396 38 86 477 20 37 418 126
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 160 562 28 1 417 40 91 502 21 39 440 133
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 160 562 28 1 417 40 91 502 21 39 440 133
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol: 160 562 28 1 417 40 91 502 21 39 440 133

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.94 0.94 0.95 0.94 0.94 0.95 0.94 0.94 0.95 0.92 0.92
Lanes: 1.00 1.81 0.09 1.00 1.82 0.18 1.00 1.92 0.08 1.00 1.54 0.46
Final Sat: 1805 3415 170 1805 3251 312 1805 3444 144 1805 2675 809

Capacity Analysis Module:
Vol/Sat: 0.09 0.16 0.16 0.00 0.13 0.13 0.05 0.15 0.15 0.02 0.16 0.16
Crit Moves: ****
Green/Cycle: 0.12 0.30 0.30 0.12 0.30 0.30 0.12 0.30 0.30 0.12 0.30 0.30
Volume/Cap: 0.73 0.54 0.54 0.00 0.42 0.42 0.41 0.48 0.48 0.18 0.54 0.54
Delay/Veh: 48.2 24.3 24.3 31.6 23.0 23.0 34.5 23.5 23.5 32.7 24.3 24.3
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 48.2 24.3 24.3 31.6 23.0 23.0 34.5 23.5 23.5 32.7 24.3 24.3
DesignQueue: 7 19 1 0 14 1 4 16 1 2 15 4

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1997 HCM Operations Method (Base Volume Alternative)

Intersection #17 Jackson St./Airport Blvd.

Cycle (sec): 85 Critical Vol./Cap. (X): 0.652
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 45.7
Optimal Cycle: 85 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	13 96 272	299 31 8	11 361 6	76 209 280
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	13 96 272	299 31 8	11 361 6	76 209 280
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	14 101 286	315 33 8	12 380 6	80 220 295
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	14 101 286	315 33 8	12 380 6	80 220 295
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	14 101 286	315 33 8	12 380 6	80 220 295

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.95 0.81	0.95 0.92 0.92	0.95 0.95 0.95	0.95 0.95 0.81
Lanes:	1.00 1.00 1.00	1.00 1.61 0.39	1.00 1.97 0.03	1.00 1.00 1.00
Final Sat:	1805 1805 1534	1805 2821 684	1805 3547 56	1805 1805 1534

Capacity Analysis Module:

Vol/Sat:	0.01 0.06 0.19	0.17 0.01 0.01	0.01 0.11 0.11	0.04 0.12 0.19
Crit Moves:	****	****	****	****
Green/Cycle:	0.13 0.29 0.29	0.15 0.32 0.32	0.12 0.29 0.29	0.12 0.29 0.29
Volume/Cap:	0.16 0.19 0.63	1.14 0.04 0.04	0.06 0.36 0.36	0.38 0.41 0.65
Delay/Veh:	32.7 22.5 28.2	133.7 19.9 19.9	33.4 23.9 23.9	35.7 24.3 28.2
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	32.7 22.5 28.2	133.7 19.9 19.9	33.4 23.9 23.9	35.7 24.3 28.2
DesignQueue:	1 3 10	13 1 0	1 13 0	3 8 10

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Level Of Service Computation Report

1997 HCM Operations Method (Base Volume Alternative)

Intersection #18 Harrison St./Airport Blvd.

Cycle (sec): 82 Critical Vol./Cap. (X): 0.565
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 27.7
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	29 967 110	33 951 111	134 465 255	42 199 7
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	29 967 110	33 951 111	134 465 255	42 199 7
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	31 1018 116	35 1001 117	141 489 268	44 209 7
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	31 1018 116	35 1001 117	141 489 268	44 209 7
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	31 1018 116	35 1001 117	141 489 268	44 209 7

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.90 0.90	0.95 0.90 0.90	0.95 0.90 0.90	0.95 0.95 0.95
Lanes:	1.00 2.69 0.31	1.00 2.69 0.31	1.00 1.29 0.71	1.00 1.94 0.06
Final Sat:	1805 4587 523	1805 4570 534	1805 2208 1210	1805 3476 116

Capacity Analysis Module:

Vol/Sat:	0.02 0.22 0.22	0.02 0.22 0.22	0.08 0.22 0.22	0.02 0.06 0.06
Crit Moves:	****	****	****	****
Green/Cycle:	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30
Volume/Cap:	0.14 0.73 0.73	0.16 0.72 0.72	0.64 0.73 0.73	0.20 0.20 0.20
Delay/Veh:	32.5 27.2 27.2	32.6 27.0 27.0	40.5 28.0 28.0	32.8 21.2 21.2
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	32.5 27.2 27.2	32.6 27.0 27.0	40.5 28.0 28.0	32.8 21.2 21.2
DesignQueue:	1 14 4	1 33 4	6 16 9	2 7 0

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #19 Grapefruit Blvd./Airport Blvd.

Cycle (sec): 82 Critical Vol./Cap. (X): 0.637
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 43.1
Optimal Cycle: 82 Level Of Service: D

Approach	North Bound	South Bound	East Bound	West Bound
Movement	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 3 0 1	2 0 2 1 0

Volume Module:

Base Vol:	120 550 332	31 501 76	116 539 81	478 652 90
Brown Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	120 550 332	31 501 76	116 539 81	478 652 90
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	126 579 349	33 527 80	122 567 85	503 686 95
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	126 579 349	33 527 80	122 567 85	503 686 95
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	126 579 349	33 527 80	122 567 85	503 686 95

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	1.00 0.90 1.00	1.00 0.93 0.93	0.95 0.91 0.85	0.92 0.89 0.89
Lanes:	2.00 1.25 0.75	1.00 1.74 0.26	1.00 3.00 1.00	2.00 2.64 0.36
Final Sat:	1802 2226 1262	1805 3072 466	1805 5187 1615	3502 4474 520

Capacity Analysis Module:

Vol/Sat:	0.04 0.27 0.27	0.02 0.17 0.17	0.07 0.11 0.05	0.14 0.15 0.15
Crit. Moves:	****	****	****	****
Green/Cycle:	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30
Volume/Cap:	0.30 0.89 0.89	0.15 0.56 0.56	0.55 0.36 0.17	1.18 0.50 0.50
Delay/Veh:	33.2 37.2 37.2	32.5 24.6 24.6	37.0 22.4 21.1	138.0 23.7 23.7
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	33.2 37.2 37.2	32.5 24.6 24.6	37.0 22.4 21.1	138.0 23.7 23.7
DesignQueue:	5 20 12	1 17 3	5 18 3	21 23 3

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #20 Grapefruit Blvd./Ave. 62

Cycle (sec): 85 Critical Vol./Cap. (X): 0.465
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 45.4
Optimal Cycle: 82 Level Of Service: D

Approach	North Bound	South Bound	East Bound	West Bound
Movement	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	116 434 64	29 210 16	26 57 93	292 58 60
Brown Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	116 434 64	29 210 16	26 57 93	292 58 60
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	122 457 67	31 221 17	27 60 98	307 61 63
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	122 457 67	31 221 17	27 60 98	307 61 63
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	122 457 67	31 221 17	27 60 98	307 61 63

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	1.00 0.93 0.93	0.95 0.94 0.94	0.95 0.95 0.81	0.95 0.95 0.81
Lanes:	1.00 1.74 0.26	1.00 1.86 0.14	1.00 1.00 1.00	1.00 1.00 1.00
Final Sat:	1805 3089 453	1805 3315 255	1805 1805 1534	1805 1805 1534

Capacity Analysis Module:

Vol/Sat:	0.07 0.15 0.15	0.02 0.07 0.07	0.01 0.03 0.06	0.17 0.03 0.04
Crit. Moves:	****	****	****	****
Green/Cycle:	0.12 0.29 0.29	0.12 0.29 0.29	0.13 0.29 0.29	0.15 0.32 0.32
Volume/Cap:	0.57 0.50 0.50	0.15 0.23 0.23	0.12 0.11 0.22	1.11 0.11 0.13
Delay/Veh:	39.3 25.2 25.2	34.0 22.8 22.8	33.1 21.9 22.8	123.7 20.4 20.6
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	39.3 25.2 25.2	34.0 22.8 22.8	33.1 21.9 22.8	123.7 20.4 20.6
DesignQueue:	5 16 2	1 7 1	1 2 3	13 2 2

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #1 Washington St./Country Club Dr.

Cycle (sec): 118 Critical Vol./Cap. (X): 0.898
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 48.4
Optimal Cycle: 118 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Ovl	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 3 1 0	1 0 4 0 1	2 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	138 1378	17 107 1560	927 1034 393	124 15 395	21
Growth Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00	1.00
Initial Bse:	138 1378	17 107 1560	927 1034 393	124 15 395	21
User Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00	1.00
PHF Adj:	0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95	0.95
PHF Volume:	145 1451	18 113 1642	976 1088 414	131 16 416	22
Reduced Vol:	145 1451	18 113 1642	976 1088 414	131 16 416	22
PCB Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00	1.00
MLF Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00	1.00
Final Vol:	145 1451	18 113 1642	976 1088 414	131 16 416	22

Saturation Flow Module:

Sat/Lane:	1900 1900	1900 1900 1900	1900 1900 1900	1900 1900	1900
Adjustment:	0.95 0.91	0.91 0.95 0.91	0.85 0.92 0.92	0.92 0.94	0.94
Lanes:	1.00 3.95	0.05 1.00 4.00	1.00 2.00 1.52	0.48 1.00 1.90	0.10
Final Sat:	1805 4818	95 1805 6916	1615 1502 2644	836 1805 3405	180

Capacity Analysis Module:

Vol/Sat:	0.08 0.21	0.21 0.06 0.24	0.60 0.31 0.16	0.16 0.01 0.12	0.12
Crit Moves:	****	****	****	****	****
Green Cycle:	0.08 0.25	0.29 0.08 0.29	0.60 0.31 0.37	0.37 0.15 0.21	0.21
Volume/Cap:	1.95 0.73	0.73 0.74 0.81	1.00 1.00 0.42	0.42 0.06 0.58	0.58
Delay/Veh:	110.9 38.9	38.9 70.0 41.4	53.4 69.2 27.8	27.8 43.2 42.8	42.8
User DelAdj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00	1.00
AdjDel/Veh:	110.9 38.9	38.9 70.0 41.4	53.4 69.2 27.8	27.8 43.2 42.8	42.8
DesignQueue:	9 71	1 7 81	29 53 18	6 1 22	1

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #2 Washington St./Hovley Ln.-42nd Ave.

Cycle (sec): 120 Critical Vol./Cap. (X): 0.921
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 45.7
Optimal Cycle: 120 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 1 2 1 0	1 0 2 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	221 1296	74 110 1476	151 176 579	193 74 776	106
Growth Adj:	1.10 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00	1.00
Initial Bse:	221 1296	74 110 1476	151 176 579	193 74 776	106
User Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00	1.00
PHF Adj:	0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95	0.95
PHF Volume:	233 1364	78 116 1554	159 185 609	203 78 817	112
Reduced Vol:	233 1364	78 116 1554	159 185 609	203 78 817	112
PCB Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00	1.00
MLF Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00	1.00
Final Vol:	233 1364	78 116 1554	159 185 609	203 78 817	112

Saturation Flow Module:

Sat/Lane:	1900 1900	1900 1900 1900	1900 1900 1900	1900 1900	1900
Adjustment:	0.95 0.90	0.90 0.95 0.90	0.90 0.95 0.91	0.91 0.95	0.93
Lanes:	1.00 2.84	0.16 1.00 2.72	0.28 1.00 1.50	0.50 1.00 1.76	0.24
Final Sat:	1805 4867	278 1805 4640	475 1805 2607	869 1805 3118	427

Capacity Analysis Module:

Vol/Sat:	0.13 0.28	0.28 0.06 0.33	0.33 0.10 0.23	0.23 0.04 0.26	0.26
Crit Moves:	****	****	****	****	****
Green Cycle:	0.14 0.42	0.42 0.28 0.36	0.36 0.11 0.31	0.31 0.28	0.28
Volume/Cap:	1.32 0.67	0.67 0.77 0.92	0.92 0.92 0.75	0.75 0.52	0.92
Delay/Veh:	86.8 28.8	28.8 75.2 44.5	44.5 94.6 39.9	39.9 55.9	54.8
User DelAdj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00	1.00
AdjDel/Veh:	86.8 28.8	28.8 75.2 44.5	44.5 94.6 39.9	39.9 55.9	54.8
DesignQueue:	14 56	3 7 72	7 11 30	10 5 42	6

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #3 Washington St./Fred Waring Dr.

Cycle (sec): 120 Critical Vol./Cap. (X): 0.925
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 46.5
Optimal Cycle: 120 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ignore			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	2	0	2	1	0	3	0	1	1	0	3	0

Volume Module:
Base Vol: 564 1458 51 46 1349 190 157 1157 1005 52 1262 48
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
Initial Bse: 564 1458 51 46 1349 190 157 1157 0 52 1262 48
User Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Volume: 516 1385 48 44 1282 181 149 1099 0 49 1199 46
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 516 1385 48 44 1282 181 149 1099 0 49 1199 46
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
Final Vol: 516 1385 48 44 1282 181 149 1099 0 49 1199 46

Saturation Flow Module:

	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.91	0.95	0.91	0.85	0.95	0.91	1.00	0.95	0.90	0.90
Lanes:	2.00	2.90	0.10	1.00	3.00	1.00	1.00	3.00	1.00	1.00	2.89	0.11
Final Sat:	1802	4988	173	1805	5187	1615	1805	5187	1900	1805	4965	190

Capacity Analysis Module:

	0.26	0.28	0.28	0.02	0.25	0.11	0.08	0.21	0.00	0.03	0.24	0.24
Vol/Sat:	0.26	0.28	0.28	0.02	0.25	0.11	0.08	0.21	0.00	0.03	0.24	0.24
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.28	0.47	0.47	0.08	0.27	0.27	0.09	0.27	0.00	0.08	0.26	0.26
Volume/Cap:	0.93	0.60	0.60	0.29	0.93	0.42	0.93	0.79	0.00	0.33	0.93	0.93
Delay/Veh:	55.8	24.1	24.1	52.8	53.5	37.0	103.6	44.2	0.0	53.1	54.2	54.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.8	24.1	24.1	52.8	53.5	37.0	103.6	44.2	0.0	53.1	54.2	54.2
DesignQueue:	47	53	2	3	67	9	9	57	0	3	63	2

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #4 Washington St./Miles Ave.

Cycle (sec): 120 Critical Vol./Cap. (X): 0.901
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 47.6
Optimal Cycle: 120 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	2	0	2	1	0	3	0	1	1	0	1	0

Volume Module:
Base Vol: 271 2145 62 350 2034 2 29 242 216 59 455 314
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 271 2145 62 350 2034 2 29 242 216 59 455 314
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 285 2258 65 368 2141 2 31 255 227 62 479 331
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 285 2258 65 368 2141 2 31 255 227 62 479 331
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol: 285 2258 65 368 2141 2 31 255 227 62 479 331

Saturation Flow Module:

	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.91	0.95	0.91	0.85	0.95	0.91	1.00	0.95	0.88	0.89
Lanes:	2.00	2.92	0.08	2.00	2.99	0.01	1.00	1.06	0.94	1.00	1.18	0.82
Final Sat:	1802	5022	145	1805	5182	5	1805	1774	1579	1805	2005	1385

Capacity Analysis Module:

	0.08	0.45	0.45	0.11	0.41	0.41	0.02	0.14	0.14	0.03	0.24	0.24
Vol/Sat:	0.08	0.45	0.45	0.11	0.41	0.41	0.02	0.14	0.14	0.03	0.24	0.24
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.08	0.46	0.46	0.11	0.49	0.49	0.08	0.24	0.24	0.09	0.25	0.25
Volume/Cap:	0.98	0.97	0.97	0.97	0.85	0.85	0.21	0.61	0.61	0.37	0.97	0.97
Delay/Veh:	101.0	44.0	44.0	92.0	29.7	29.7	52.0	42.4	42.4	52.3	69.2	69.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	101.0	44.0	44.0	92.0	29.7	29.7	52.0	42.4	42.4	52.3	69.2	69.2
DesignQueue:	18	51	3	22	81	0	2	13	12	4	26	18

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #5 Washington St./Hwy. 111.

Cycle (sec): 88 Critical Vol./Cap. (X): 0.857
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 41.7
Optimal Cycle: 88 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Controls:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Ovl	Ovl
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 3 1 0	2 0 3 1 0	1 0 4 0 1	1 0 3 0 1

Volume Module:

Base Vol:	491 1639	4	615 1457	122	122 1007	757	6 1141	547
Growth Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
Initial Bse:	491 1639	4	615 1457	122	122 1007	757	6 1141	547
User Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
PHF Adj:	0.95 0.95	0.95	0.95 0.95	0.95	0.95 0.95	0.95	0.95 0.95	0.95
PHF Volume:	477 1725	4	647 1534	128	128 1060	797	6 1201	576
Reduct Vol:	0 0 0	0	0 0 0	0	0 0 0	0	0 0 0	0
Reduced Vol:	477 1725	4	647 1534	128	128 1060	797	6 1201	576
PCE Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
MLF Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
Final Vol:	477 1725	4	647 1534	128	128 1060	797	6 1201	576

Saturation Flow Module:

Sat/Lane:	1900 1900	1900	1900 1900	1900	1900 1900	1900	1900 1900	1900
Adjustment:	0.92 0.91	0.91	0.92 0.90	0.90	0.95 0.91	0.85	0.95 0.91	0.85
Lanes:	0.00 3.99	0.01	2.00 3.69	0.11	1.00 4.00	1.00	1.00 3.00	1.00
Final Sat:	1802 6900	16	3502 6307	526	1805 6916	1615	1805 5187	1615

Capacity Analysis Module:

Vol/Sat:	0.21 0.25	0.25	0.18 0.24	0.24	0.07 0.15	0.49	0.00 0.23	0.36
Crit Moves:	****	****	****	****	****	****	****	****
Green/Cycle:	0.20 0.28	0.28	0.20 0.28	0.28	0.11 0.28	0.48	0.11 0.27	0.47
Volume/Cap:	0.06 0.88	0.88	0.94 0.86	0.86	0.65 0.54	1.03	0.03 0.85	0.76
Delay/Veh:	35.5 35.0	35.0	56.3 33.8	33.8	44.8 26.9	62.5	34.7 35.0	23.7
User DelAdj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
AdjDel/Veh:	35.5 35.0	35.0	56.3 33.8	33.8	44.8 26.9	62.5	34.7 35.0	23.7
DesignQueue:	30 64	0	27 57	5	6 39	23	0 45	16

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #6 Washington St./Eisenhower Dr.

Cycle (sec): 120 Critical Vol./Cap. (X): 0.524
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 36.7
Optimal Cycle: 120 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Controls:	Protected	Protected	Split Phase	Split Phase
Rights:	Include	Ovl	Include	Include
Min. Green:	10 25 25	10 25 25	25 25 25	25 25 25
Lanes:	1 0 3 1 0	1 0 3 0 1	2 0 1 1 0	0 0 1 0 0

Volume Module:

Base Vol:	20 1909	24	58 1842	152	136 2	13	21 2	43
Growth Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
Initial Bse:	20 1909	24	58 1842	152	136 2	13	21 2	43
User Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
PHF Adj:	0.95 0.95	0.95	0.95 0.95	0.95	0.95 0.95	0.95	0.95 0.95	0.95
PHF Volume:	21 2009	25	61 1939	160	143 2	14	22 2	45
Reduct Vol:	0 0 0	0	0 0 0	0	0 0 0	0	0 0 0	0
Reduced Vol:	21 2009	25	61 1939	160	143 2	14	22 2	45
PCE Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
MLF Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
Final Vol:	21 2009	25	61 1939	160	143 2	14	22 2	45

Saturation Flow Module:

Sat/Lane:	1900 1900	1900	1900 1900	1900	1900 1900	1900	1900 1900	1900
Adjustment:	0.95 0.91	0.91	0.95 0.91	0.85	0.92 0.95	0.81	0.80 0.80	0.80
Lanes:	1.00 3.95	0.05	1.00 3.00	1.00	2.00 1.00	1.00	0.32 0.03	0.65
Final Sat:	1805 6817	95	1805 5187	1615	3502 1805	1534	484 44	990

Capacity Analysis Module:

Vol/Sat:	0.01 0.29	0.29	0.03 0.37	0.10	0.04 0.00	0.01	0.05 0.05	0.05
Crit Moves:	****	****	****	****	****	****	****	****
Green/Cycle:	0.08 0.40	0.40	0.08 0.40	0.61	0.21 0.21	0.21	0.21 0.21	0.21
Volume/Cap:	0.14 0.74	0.74	0.41 0.93	0.16	0.20 0.01	0.04	0.22 0.22	0.22
Delay/Veh:	31.4 31.7	31.7	54.0 43.1	10.3	39.3 37.6	38.0	39.7 39.7	39.7
User DelAdj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
AdjDel/Veh:	31.4 31.7	31.7	54.0 43.1	10.3	39.3 37.6	38.0	39.7 39.7	39.7
DesignQueue:	1 86	1	4 85	4	8 0	1	1 0	2

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #7 Washington St./Ave. 50

Cycle (sec): 95 Critical Vol./Cap. (X): 0.850
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 52.8
Optimal Cycle: 95 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	3	0	1	2	1	0	2	0	1	2

Volume Module:

Base Vol:	86	1007	236	327	1024	500	558	388	75	288	395	369
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	86	1007	236	327	1024	500	558	388	75	288	395	369
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	91	1060	248	344	1078	526	587	408	79	303	416	388
Reduced Vol:	91	1060	248	344	1078	526	587	408	79	303	416	388
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	91	1060	248	344	1078	526	587	408	79	303	416	388

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.85	0.92	0.91	0.85	0.95	0.95	0.85	0.95	0.95	0.85
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat:	1805	5167	1615	3502	5187	1615	1805	3610	1615	1805	3610	1615

Capacity Analysis Module:

Vol/Sat:	0.05	0.20	0.15	0.10	0.21	0.33	0.33	0.11	0.05	0.17	0.12	0.24
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.11	0.26	0.26	0.11	0.26	0.51	0.24	0.26	0.26	0.24	0.26	0.37
Volume/Cap:	0.48	0.78	0.38	0.93	0.79	0.64	1.34	0.43	0.19	0.69	0.44	0.65
Delay/Veh:	41.9	35.3	32.5	72.5	35.7	19.0	205.2	29.4	27.3	37.6	29.5	27.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.9	35.3	32.5	72.5	35.7	19.0	205.2	29.4	27.3	37.6	29.5	27.5
DesignQueue:	4	43	10	17	44	15	26	16	3	13	17	14

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #8 Jefferson St./Country Club Dr.

Cycle (sec): 90 Critical Vol./Cap. (X): 0.853
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 44.1
Optimal Cycle: 90 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ignore			Include			Include		
Min. Green:	10	25	25	0	25	25	10	25	25	10	25	0
Lanes:	1	0	2	1	0	2	0	1	2	0	1	0

Volume Module:

Base Vol:	367	1155	146	0	865	802	698	255	383	136	301	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	367	1155	146	0	865	0	698	255	383	136	301	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	386	1216	154	0	911	0	735	268	403	143	317	0
Reduced Vol:	386	1216	154	0	911	0	735	268	403	143	317	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	386	1216	154	0	911	0	735	268	403	143	317	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.89	0.89	1.00	0.95	1.00	0.92	1.00	0.85	0.95	1.00	1.00
Lanes:	2.00	2.66	0.34	1.00	2.00	1.00	2.00	1.00	1.00	1.00	1.00	0.00
Final Sat:	1802	4526	573	1900	3610	1900	3502	1900	1615	1805	1900	0

Capacity Analysis Module:

Vol/Sat:	0.11	0.27	0.27	0.00	0.25	0.00	0.21	0.14	0.25	0.08	0.17	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.11	0.39	0.39	0.00	0.28	0.00	0.20	0.34	0.34	0.14	0.28	0.00
Volume/Cap:	0.99	0.69	0.69	0.00	0.31	0.00	1.05	0.41	0.73	0.58	0.60	0.00
Delay/Veh:	33.4	24.0	24.0	0.0	43.2	0.0	83.7	23.2	31.0	39.9	30.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.4	24.0	24.0	0.0	43.2	0.0	83.7	23.2	31.0	39.9	30.1	0.0
DesignQueue:	18	40	5	0	35	0	31	9	14	6	12	0

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #9 Jefferson St./Ave. 44

Cycle (sec): 115 Critical Vol./Cap. (X): 0.895
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 49.9
Optimal Cycle: 115 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 2 0 1	1 0 2 0 1

Volume Module:

Base Vol:	44 1391	44 1 1229 199	267 755 151	70 1113 1
Growth Adj:	1.00 1.00	1.00 1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	44 1391	44 1 1229 199	267 755 151	70 1113 1
User Adj:	1.00 1.00	1.00 1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95	0.95 0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	46 1464	46 1 1294 209	281 795 159	74 1172 1
Reduced Vol:	0 0 0	0 0 0 0	0 0 0	0 0 0
Reduced Vol:	46 1464	46 1 1294 209	281 795 159	74 1172 1
PCE Adj:	1.00 1.00	1.00 1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00	1.00 1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	46 1464	46 1 1294 209	281 795 159	74 1172 1

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	1.95 0.91 0.91	0.95 0.89 0.89	0.95 0.95 0.85	0.95 0.95 0.85
Lanes:	1.00 2.91 0.99	1.00 2.58 0.42	1.00 2.00 1.00	1.00 2.00 1.00
Final Sat:	1805 5009 167	1805 4372 706	1805 3610 1615	1805 3610 1615

Capacity Analysis Module:

Vol/Sat:	0.03 0.29 0.29	0.00 0.30 0.30	0.16 0.22 0.10	0.04 0.32 0.00
Crit Moves:	****	****	****	****
Green/Cycle:	0.09 0.31 0.31	0.09 0.31 0.31	0.16 0.41 0.41	0.09 0.34 0.34
Volume/Cap:	0.29 0.95 0.95	0.01 0.96 0.96	0.96 0.53 0.24	0.47 0.96 0.00
Delay/Veh:	50.2 51.2 51.2	48.0 53.4 53.4	89.5 25.7 22.1	52.2 54.3 25.2
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	50.2 51.2 51.2	48.0 53.4 53.4	89.5 25.7 22.1	52.2 54.3 25.2
DesignQueue:	3 70 2	0 61 10	16 32 6	4 54 0

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #10 Jefferson St./Miles Ave.

Cycle (sec): 84 Critical Vol./Cap. (X): 0.852
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 43.1
Optimal Cycle: 84 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Ignore
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 1 0 1	1 0 1 0 1

Volume Module:

Base Vol:	262 1126 25	146 1197 107	227 421 67	111 319 125
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 0.00
Initial Bse:	262 1126 25	146 1197 107	227 421 67	111 319 125
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 0.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.00
PHF Volume:	276 1185 26	154 1260 113	239 443 71	117 336 0
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	276 1185 26	154 1260 113	239 443 71	117 336 0
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 0.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 0.00
Final Vol:	276 1185 26	154 1260 113	239 443 71	117 336 0

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	1.95 0.91 0.91	0.95 0.90 0.90	0.95 1.00 0.85	0.95 1.00 1.00
Lanes:	1.00 2.91 0.99	1.00 2.75 0.25	1.00 1.00 1.00	1.00 1.00 1.00
Final Sat:	1805 5009 167	1805 4703 422	1805 1900 1615	1805 1900 1900

Capacity Analysis Module:

Vol/Sat:	0.15 0.23 0.23	0.09 0.27 0.27	0.13 0.23 0.04	0.06 0.18 0.00
Crit Moves:	****	****	****	****
Green/Cycle:	0.14 0.31 0.31	0.13 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.00
Volume/Cap:	0.09 0.75 0.75	0.68 0.90 0.90	1.09 0.78 0.15	0.54 0.59 0.00
Delay/Veh:	118.6 27.9 27.9	43.4 35.9 35.9	123.5 33.7 21.7	37.5 26.9 0.0
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	118.6 27.9 27.9	43.4 35.9 35.9	123.5 33.7 21.7	37.5 26.9 0.0
DesignQueue:	12 40 1	6 44 4	10 15 2	3 12 0

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #11 Jefferson St./Hwy. 111

Cycle (sec): 82 Critical Vol./Cap. (X): 0.794
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 36.5
Optimal Cycle: 82 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 10 25 25 10 25 25 10 25 25 10 25 25
Lanes: 1 0 3 0 1 2 0 3 0 1 2 0 3 0 1

Volume Module:
Base Vol: 87 957 345 130 971 131 167 1493 107 368 1404 202
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 87 957 345 130 971 131 167 1493 107 368 1404 202
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 92 1007 363 137 1022 138 176 1572 113 387 1478 213
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 92 1007 363 137 1022 138 176 1572 113 387 1478 213
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol: 92 1007 363 137 1022 138 176 1572 113 387 1478 213

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 0.91 0.85 0.92 0.91 0.85 0.92 0.91 0.85 0.92 0.91 0.85
Lanes: 2.00 3.00 1.00 2.00 3.00 1.00 2.00 3.00 1.00 2.00 3.00 1.00
Final Sat: 3502 5187 3615 3502 5187 3615 3502 5187 3615 3502 5187 3615

Capacity Analysis Module:
Vol/Sat: 0.03 0.19 0.22 0.04 0.20 0.09 0.05 0.30 0.07 0.11 0.28 0.13
Crit Moves: ****
Green/Cycle: 0.12 0.30 0.30 0.12 0.30 0.30 0.12 0.30 0.30 0.12 0.30 0.30
Volume/Cap: 0.22 0.64 0.74 0.32 0.65 0.28 0.41 0.99 0.23 0.91 0.93 0.43
Delay/Veh: 32.7 25.5 31.3 33.3 25.6 22.0 33.9 49.6 21.5 58.1 38.4 23.4
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 32.7 25.5 31.3 33.3 25.6 22.0 33.9 49.6 21.5 58.1 38.4 23.4
DesignQueue: 4 33 12 6 34 4 7 54 4 16 50 7

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #12 Jefferson St./Ave. 48

Cycle (sec): 90 Critical Vol./Cap. (X): 0.863
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 35.4
Optimal Cycle: 90 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Ovl Include
Min. Green: 10 25 25 10 25 25 10 25 25 10 25 25
Lanes: 1 0 3 0 1 2 0 2 1 0 1 0 2 0 1 1 0

Volume Module:
Base Vol: 440 1084 91 77 1139 198 196 628 533 44 700 59
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 440 1084 91 77 1139 198 196 628 533 44 700 59
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 463 1141 96 81 1199 208 206 661 561 46 737 62
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 463 1141 96 81 1199 208 206 661 561 46 737 62
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol: 463 1141 96 81 1199 208 206 661 561 46 737 62

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 0.90 0.90 0.95 0.89 0.89 0.95 0.95 0.85 0.92 0.94 0.94
Lanes: 2.00 2.77 0.23 1.00 2.56 0.44 1.00 2.00 1.00 2.00 1.84 0.16
Final Sat: 3502 4727 398 1805 4323 750 1805 3610 1615 3502 3290 277

Capacity Analysis Module:
Vol/Sat: 0.13 0.24 0.24 0.04 0.28 0.28 0.11 0.18 0.35 0.01 0.22 0.22
Crit Moves: ****
Green/Cycle: 0.15 0.33 0.33 0.13 0.31 0.31 0.13 0.29 0.44 0.12 0.28 0.28
Volume/Cap: 0.89 0.73 0.73 0.34 0.89 0.89 0.89 0.63 0.79 0.11 0.81 0.81
Delay/Veh: 54.6 28.4 28.4 36.4 36.1 36.1 70.1 29.0 27.8 35.8 35.2 35.2
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 54.6 28.4 28.4 36.4 36.1 36.1 70.1 29.0 27.8 35.8 35.2 35.2
DesignQueue: 20 41 3 4 44 8 9 25 17 2 28 2

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #13 Jefferson St./Ave. 50

Cycle (sec): 97 Critical Vol./Cap. (X): 0.618
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 31.7
Optimal Cycle: 97 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Split Phase	Split Phase
Rights:	Include	Ovl	Include	Include
Min. Green:	10 25 25	10 25 25	25 25 25	25 25 25
Lanes:	2 0 3 0 1	2 0 3 0 1	1 1 1 0 1	1 1 1 0 1

Volume Module:

Base Vol:	52 709 29	179 776 522	502 470 71	46 514 186
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	52 709 29	179 776 522	502 470 71	46 514 186
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	55 746 31	188 817 549	528 495 75	48 541 196
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	55 746 31	188 817 549	528 495 75	48 541 196
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	55 746 31	188 817 549	528 495 75	48 541 196

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 0.91 0.85	0.92 0.91 0.85	0.90 0.95 0.85	0.90 0.95 0.85
Lanes:	2.00 3.00 1.00	2.00 3.00 1.00	1.59 1.41 1.00	1.00 2.00 1.00
Final Sat:	3502 5187 1615	3502 5187 1615	2721 2551 1615	1715 3610 1615

Capacity Analysis Module:

Vol/Sat:	0.02 0.14 0.02	0.05 0.16 0.34	0.19 0.19 0.05	0.03 0.15 0.12
Crit Moves:	****	****	****	****
Green/Cycle:	0.10 0.26 0.26	0.10 0.26 0.52	0.26 0.26 0.26	0.26 0.26 0.26
Volume/Cap:	0.15 0.56 0.07	0.52 0.61 0.66	0.75 0.75 0.18	0.11 0.58 0.47
Delay/Veh:	33.8 31.7 27.3	42.6 32.6 19.2	35.6 35.6 28.2	27.5 32.3 31.3
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	33.8 31.7 27.3	42.6 32.6 19.2	35.6 35.6 28.2	27.5 32.3 31.3
DesignQueue:	3 31 1	9 34 16	22 21 3	2 22 8

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #15 Madison St. Ave. 50

Cycle (sec): 85 Critical Vol./Cap. (X): 0.822
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 46.4
Optimal Cycle: 85 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	26 686 44	338 626 92	78 504 24	79 593 224
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	26 686 44	338 626 92	78 504 24	79 593 224
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	27 722 46	356 659 97	82 531 25	83 624 236
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	27 722 46	356 659 97	82 531 25	83 624 236
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	27 722 46	356 659 97	82 531 25	83 624 236

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.98 0.94 0.94	0.95 0.93 0.93	0.95 0.94 0.94	0.95 0.91 0.91
Lanes:	1.00 1.88 0.12	1.00 1.74 0.26	1.00 1.91 0.09	1.00 1.45 0.55
Final Sat:	1205 3363 214	1805 3087 454	1805 3424 161	1805 2512 950

Capacity Analysis Module:

Vol/Sat:	0.01 0.21 0.21	0.20 0.21 0.21	0.05 0.16 0.16	0.05 0.25 0.25
Crit Moves:	****	****	****	****
Green/Cycle:	0.13 0.29 0.29	0.15 0.32 0.32	0.12 0.29 0.29	0.12 0.29 0.29
Volume/Cap:	0.12 0.73 0.73	1.29 0.67 0.67	0.39 0.53 0.53	0.39 0.84 0.84
Delay/Veh:	33.1 29.6 29.6	190.8 26.6 26.6	35.8 25.6 25.6	35.9 34.8 34.8
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	33.1 29.6 29.6	190.8 26.6 26.6	35.8 25.6 25.6	35.9 34.8 34.8
DesignQueue:	1 25 2	15 22 3	3 18 1	3 22 8

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #16 Madison St./Ave. 52

Cycle (sec): 82 Critical Vol./Cap. (X): 0.645
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 28.8
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	147 495 64	7 590 78	48 616 170	43 618 172
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	147 495 64	7 590 78	48 616 170	43 618 172
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	155 521 67	7 621 82	51 648 179	45 651 181
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	155 521 67	7 621 82	51 648 179	45 651 181
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	155 521 67	7 621 82	51 648 179	45 651 181

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.93 0.93	0.95 0.93 0.93	0.95 0.92 0.92	0.95 0.92 0.92
Lanes:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Sat:	1805 1805 1805	1805 1805 1805	1805 1805 1805	1805 1805 1805

Capacity Analysis Module:

Vol/Sat:	0.09 0.17 0.17	0.00 0.20 0.20	0.03 0.24 0.24	0.02 0.24 0.24
Crit Moves:	****	****	****	****
Green/Cycle:	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30
Volume/Cap:	0.70 0.54 0.54	0.03 0.65 0.65	0.23 0.78 0.78	0.20 0.78 0.78
Delay/Veh:	44.5 24.3 24.3	31.8 26.1 26.1	33.1 29.6 29.6	32.9 29.8 29.8
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	44.5 24.3 24.3	31.8 26.1 26.1	33.1 29.6 29.6	32.9 29.8 29.8
DesignQueue:	6 17 2	0 21 3	2 22 6	2 22 6

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #17 Jackson St./Airport Blvd.

Cycle (sec): 90 Critical Vol./Cap. (X): 0.588
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 53.5
Optimal Cycle: 90 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	22 84 108	357 222 65	13 330 15	216 544 285
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	22 84 108	357 222 65	13 330 15	216 544 285
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	23 88 114	376 234 68	14 347 16	227 573 300
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	23 88 114	376 234 68	14 347 16	227 573 300
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	23 88 114	376 234 68	14 347 16	227 573 300

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.95 0.81	0.95 0.92 0.92	0.95 0.94 0.94	0.95 0.90 0.90
Lanes:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Sat:	1805 1805 1805	1805 1805 1805	1805 1805 1805	1805 1805 1805

Capacity Analysis Module:

Vol/Sat:	0.01 0.05 0.07	0.21 0.09 0.09	0.01 0.10 0.10	0.13 0.26 0.26
Crit Moves:	****	****	****	****
Green/Cycle:	0.13 0.28 0.28	0.19 0.34 0.34	0.11 0.28 0.28	0.12 0.28 0.28
Volume/Cap:	0.09 0.18 0.27	1.07 0.26 0.26	0.07 0.36 0.36	1.07 0.90 0.90
Delay/Veh:	34.3 24.7 25.5	105.4 21.8 21.8	35.8 26.3 26.3	122.6 42.9 42.9
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	34.3 24.7 25.5	105.4 21.8 21.8	35.8 26.3 26.3	122.6 42.9 42.9
DesignQueue:	1 3 4	16 8 2	1 13 1	10 22 11

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #18 Harrison St./Airport Blvd.

Cycle (sec): 82 Critical Vol./Cap. (X): 0.793
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 39.6
Optimal Cycle: 82 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 2 1 0	1 0 2 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	238 1071 62	8 1195 217	148 283 141	93 497 40
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	238 1071 62	8 1195 217	148 283 141	93 497 40
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	251 1127 65	8 1258 228	156 298 148	98 523 42
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	251 1127 65	8 1258 228	156 298 148	98 523 42
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	251 1127 65	8 1258 228	156 298 148	98 523 42

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.90 0.90	0.95 0.89 0.89	0.95 0.90 0.90	0.95 0.94 0.94
Lanes:	1.00 2.84 0.16	1.00 2.54 0.46	1.00 1.34 0.66	1.00 1.85 0.15
Final Sat:	1805 4865 281	1805 4290 778	1805 2291 1138	1805 3305 265

Capacity Analysis Module:

Vol/Sat:	0.14 0.23 0.23	0.00 0.29 0.29	0.09 0.13 0.13	0.05 0.16 0.16
Crit Moves:	****	****	****	****
Green/Cycle:	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30
Volume/Cap:	0.14 0.76 0.76	0.04 0.96 0.96	0.71 0.43 0.43	0.45 0.52 0.52
Delay/Veh:	119.6 28.0 28.0	31.8 42.8 42.8	44.8 23.1 23.1	34.9 24.0 24.0
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	119.6 28.0 28.0	31.8 42.8 42.8	44.8 23.1 23.1	34.9 24.0 24.0
DesignQueue:	20 38 2	0 43 8	6 10 5	4 17 1

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #19 Grapefruit Blvd./Airport Blvd.

Cycle (sec): 82 Critical Vol./Cap. (X): 0.793
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 44.7
Optimal Cycle: 82 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 1 1 0	1 0 1 1 0	1 0 3 0 1	2 0 2 1 0

Volume Module:

Base Vol:	94 607 454	95 631 154	132 854 114	391 681 52
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	94 607 454	95 631 154	132 854 114	391 681 52
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	99 639 478	100 664 162	139 899 120	412 717 55
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	99 639 478	100 664 162	139 899 120	412 717 55
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	99 639 478	100 664 162	139 899 120	412 717 55

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 0.89 0.89	0.95 0.92 0.92	0.95 0.91 0.85	0.92 0.90 0.90
Lanes:	0.00 1.14 0.35	1.00 1.61 0.39	1.00 3.00 1.00	2.50 2.79 0.21
Final Sat:	3502 1933 1446	1805 2818 687	1805 5187 1615	3502 4764 365

Capacity Analysis Module:

Vol/Sat:	0.03 0.33 0.33	0.06 0.24 0.24	0.08 0.17 0.07	0.12 0.15 0.15
Crit Moves:	****	****	****	****
Green/Cycle:	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30
Volume/Cap:	0.23 1.08 1.08	0.45 0.77 0.77	0.63 0.57 0.24	0.96 0.49 0.49
Delay/Veh:	32.8 82.3 82.3	35.0 29.5 29.5	40.1 24.5 21.7	70.2 23.6 23.6
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	32.8 82.3 82.3	35.0 29.5 29.5	40.1 24.5 21.7	70.2 23.6 23.6
DesignQueue:	4 22 16	4 22 5	6 30 4	17 24 2

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Level Of Service Computation Report

1997 HCM Operations Method (Base Volume Alternative)

Intersection #20 Grapefruit Blvd./Ave. 62

Cycle (sec): 95 Critical Vol./Cap. (X): 0.666
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 53.3
Optimal Cycle: 95 Level Of Service: D

	North Bound			South Bound			East Bound			West Bound		
Movements:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	1	1	0	1	1	0	1	1	0	1

Volume Module:

Base Vol:	121	309	87	59	438	32	25	64	143	470	105	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	121	309	87	59	438	32	25	64	143	470	105	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	127	325	92	62	461	34	26	67	151	495	111	43
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	127	325	92	62	461	34	26	67	151	495	111	43
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	127	325	92	62	461	34	26	67	151	495	111	43

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.92	0.92	0.95	0.94	0.94	0.95	0.95	0.81	0.95	0.91	0.91
Lanes:	1.00	1.56	0.44	1.00	1.86	0.14	1.00	1.00	1.00	1.00	1.44	0.56
Final Sat:	1805	2721	770	1805	3328	245	1805	1805	1534	1805	2493	966

Capacity Analysis Module:

Vol/Sat:	0.07	0.12	0.12	0.03	0.14	0.14	0.01	0.04	0.10	0.27	0.04	0.04
Vol/Node:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.11	0.26	0.26	0.11	0.26	0.26	0.14	0.26	0.26	0.24	0.36	0.36
Volume/Cap:	0.67	0.45	0.45	0.33	0.53	0.53	0.10	0.14	0.37	1.13	0.12	0.12
Delay/Veh:	49.7	29.6	29.6	40.4	30.5	30.5	35.5	26.8	29.0	120.6	20.4	20.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.7	29.6	29.6	40.4	30.5	30.5	35.5	26.8	29.0	120.6	20.4	20.4
DesignQueue:	6	13	4	3	19	1	1	3	6	21	4	1

APPENDIX F

POST 2020 GENERAL PLAN HIGH ALTERNATIVE
INTERSECTION ANALYSIS WORKSHEETS

City of La Quinta
Post 2020 General Plan High Alternative
AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #1 Washington St./Country Club Dr.

Cycle (sec): 95 Critical Vol./Cap. (X): 0.829
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 54.6
Optimal Cycle: 95 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Ovl Include Include
Min. Green: 10 25 25 10 25 25 10 25 25
Lanes: 1 0 3 1 0 1 0 4 0 1 2 0 1 1 0 1 0 1 1 0

Volume Module:
Base Vol: 125 1301 25 160 1307 598 987 253 111 29 375 68
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 125 1301 25 160 1307 598 987 253 111 29 375 68
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 132 1369 26 168 1376 629 1039 266 117 31 395 72
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 132 1369 26 168 1376 629 1039 266 117 31 395 72
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol: 132 1369 26 168 1376 629 1039 266 117 31 395 72

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.91 0.91 0.95 0.91 0.85 0.92 0.91 0.91 0.95 0.93 0.93
Lanes: 1.00 3.93 0.07 1.00 4.00 1.00 2.00 1.39 0.61 1.00 1.69 0.31
Final Sat: 1805 6767 129 1805 6916 1615 3502 2392 1052 1805 2983 544

Capacity Analysis Module:
Vol/Sat: 0.07 0.20 0.20 0.09 0.20 0.39 0.30 0.11 0.11 0.02 0.13 0.13
Crit Moves: ****
Green/Cycle: 0.11 0.26 0.26 0.11 0.26 0.51 0.24 0.36 0.36 0.14 0.26 0.26
Volume/Cap: 0.59 0.77 0.77 0.88 0.76 0.77 1.23 0.31 0.31 0.12 0.50 0.50
Delay/Veh: 31.7 34.4 34.4 77.1 34.1 23.6 148.0 22.0 22.0 35.6 30.2 30.2
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 31.7 34.4 34.4 77.1 34.1 23.6 148.0 22.0 22.0 35.6 30.2 30.2
DesignQueue: 6 56 1 8 56 18 45 9 4 1 16 3

City of La Quinta
Post 2020 General Plan High Alternative
AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #2 Washington St./Hovley Ln.-42nd Ave.

Cycle (sec): 82 Critical Vol./Cap. (X): 0.806
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 38.9
Optimal Cycle: 82 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 10 25 25 10 25 25 10 25 25
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 1 0 1 0 1 1 0

Volume Module:
Base Vol: 211 1165 62 67 1282 118 213 331 230 70 415 96
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 211 1165 62 67 1282 118 213 331 230 70 415 96
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 222 1226 65 71 1349 124 224 348 242 74 437 101
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 222 1226 65 71 1349 124 224 348 242 74 437 101
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol: 222 1226 65 71 1349 124 224 348 242 74 437 101

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.90 0.90 0.95 0.90 0.90 0.95 0.89 0.89 0.95 0.92 0.92
Lanes: 1.00 2.65 0.15 1.00 2.75 0.25 1.00 1.18 0.82 1.00 1.62 0.38
Final Sat: 1805 4691 259 1805 4689 431 1805 1999 1390 1805 2850 659

Capacity Analysis Module:
Vol/Sat: 0.12 0.25 0.25 0.04 0.29 0.29 0.12 0.17 0.17 0.04 0.15 0.15
Crit Moves: ****
Green/Cycle: 0.12 0.30 0.30 0.12 0.30 0.30 0.12 0.30 0.30 0.12 0.30 0.30
Volume/Cap: 0.61 0.82 0.82 0.32 0.94 0.94 1.02 0.57 0.57 0.34 0.50 0.50
Delay/Veh: 35.9 30.1 30.1 33.8 39.8 39.8 101.3 24.8 24.8 33.9 23.8 23.8
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 35.9 30.1 30.1 33.8 39.8 39.8 101.3 24.8 24.8 33.9 23.8 23.8
DesignQueue: 9 41 2 3 46 4 9 11 8 3 14 3

City of La Quinta
Post 2020 General Plan High Alternative
AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #3 Washington St./Fred Waring Dr.

Cycle (sec): 90 Critical Vol./Cap. (X): 0.809
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 41.5
Optimal Cycle: 90 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Ignore	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 2 1 0	1 0 3 0 1	1 0 3 0 1	1 0 2 1 0

Volume Module:

Base Vol:	306 1054	45 50 1267	156 186 942	638 41 769	54
Growth Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
Initial Bse:	306 1054	45 50 1267	156 186 942	0 41 769	54
User Adj:	0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95
PHF Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
PHF Volume:	266 1001	43 48 1204	148 177 895	0 39 731	51
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0	0
Reduced Vol:	266 1001	43 48 1204	148 177 895	0 39 731	51
PCE Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
MLF Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
Final Vol:	266 1001	43 48 1204	148 177 895	0 39 731	51

Saturation Flow Module:

Sat/Lane:	1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 0.90	0.90 0.95 0.91	0.85 0.95 0.91	1.00 0.95 0.90
Lanes:	2.00 2.88	0.12 1.00 3.00	1.00 1.00 3.00	1.00 1.00 2.80
Final Sat:	3502 4944	212 1805 5187	1615 1805 5187	1900 1805 4800

Capacity Analysis Module:

Vol/Sat:	0.22 0.20	0.20 0.03 0.23	0.09 0.10 0.17	0.00 0.02 0.15	0.15
Crit Moves:	****	****	****	****	****
Green/Cycle:	0.20 0.34	0.34 0.14 0.28	0.28 0.11 0.28	0.00 0.11 0.28	0.28
Volume/Cap:	0.09 0.59	0.59 0.19 0.84	0.33 0.88 0.62	0.00 0.19 0.55	0.55
Delay/Veh:	38.4 25.0	25.0 34.9 35.0	26.3 72.9 29.2	0.0 36.8 28.1	28.1
User DelAdj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
AdjDel/Veh:	38.4 25.0	25.0 34.9 35.0	26.3 72.9 29.2	0.0 36.8 28.1	28.1
DesignQueue:	32 35	1 2 46	5 8 34	0 2 27	2

City of La Quinta
Post 2020 General Plan High Alternative
AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #4 Washington St./Miles Ave.

Cycle (sec): 90 Critical Vol./Cap. (X): 0.571
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 38.0
Optimal Cycle: 90 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 2 1 0	2 0 2 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	21 1656	42 176 1746	8 5 231	25 45 215	198
Growth Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
Initial Bse:	21 1656	42 176 1746	8 5 231	25 45 215	198
User Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
PHF Adj:	0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95
PHF Volume:	22 1743	44 185 1838	8 5 243	26 47 226	208
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0	0
Reduced Vol:	22 1743	44 185 1838	8 5 243	26 47 226	208
PCE Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
MLF Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
Final Vol:	22 1743	44 185 1838	8 5 243	26 47 226	208

Saturation Flow Module:

Sat/Lane:	1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 0.91	0.91 0.92 0.91	0.91 0.95 0.94	0.94 0.95 0.88
Lanes:	2.00 2.93	0.07 2.00 2.99	0.01 1.00 1.81	0.19 1.00 1.04
Final Sat:	3502 5039	127 3502 5159	22 1805 3212	344 1805 1745

Capacity Analysis Module:

Vol/Sat:	0.01 0.35	0.35 0.05 0.36	0.36 0.00 0.08	0.08 0.03 0.13	0.13
Crit Moves:	****	****	****	****	****
Green/Cycle:	0.11 0.37	0.37 0.11 0.37	0.37 0.11 0.28	0.28 0.11 0.28	0.28
Volume/Cap:	0.06 0.94	0.94 0.48 0.97	0.97 0.02 0.27	0.27 0.23 0.47	0.47
Delay/Veh:	35.8 37.9	37.9 38.5 42.5	42.5 35.7 25.5	25.5 37.1 27.3	27.3
User DelAdj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
AdjDel/Veh:	35.8 37.9	37.9 38.5 42.5	42.5 35.7 25.5	25.5 37.1 27.3	27.3
DesignQueue:	1 60	2 8 64	0 0 9	1 2 8	8

City of La Quinta
Post 2020 General Plan High Alternative
AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #5 Washington St./Hwy. 111.

Cycle (sec): 90 Critical Vol./Cap. (X): 0.787
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 44.5
Optimal Cycle: 90 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Ovl	Ovl
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 3 1 0	2 0 3 1 0	1 0 4 0 1	1 0 3 0 1

Volume Module:

Base Vol:	785 1075 14	478 1106 92	110 1052 749	11 971 515
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	785 1075 14	478 1106 92	110 1052 749	11 971 515
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	826 1132 15	503 1164 97	116 1107 788	12 1022 542
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	826 1132 15	503 1164 97	116 1107 788	12 1022 542
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	826 1132 15	503 1164 97	116 1107 788	12 1022 542

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 0.91 0.91	0.92 0.90 0.90	0.95 0.91 0.85	0.95 0.91 0.85
Lanes:	2.00 3.95 0.05	2.00 3.69 0.31	1.00 4.00 1.00	1.00 3.00 1.00
Final Sat:	1502 6812 90	3502 6307 526	1805 6916 1615	1805 5187 1615

Capacity Analysis Module:

Vol/Sat:	0.24 0.17 0.17	0.14 0.18 0.18	0.06 0.16 0.49	0.01 0.20 0.34
Crit Moves:	****	****	****	****
Green/Cycle:	0.20 0.28 0.28	0.20 0.28 0.28	0.11 0.28 0.48	0.11 0.28 0.48
Volume/Cap:	1.18 0.60 0.60	0.72 0.66 0.66	0.58 0.58 1.02	0.06 0.71 0.70
Delay/Veh:	131.1 28.7 28.7	37.2 29.7 29.7	42.2 28.4 61.4	35.9 30.9 21.4
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	131.1 28.7 28.7	37.2 29.7 29.7	42.2 28.4 61.4	35.9 30.9 21.4
DesignQueue:	35 43 1	21 44 4	5 42 23	1 39 15

City of La Quinta
Post 2020 General Plan High Alternative
AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #6 Washington St./Eisenhower Dr.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.454
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 43.6
Optimal Cycle: 100 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Split Phase	Split Phase
Rights:	Include	Ovl	Include	Include
Min. Green:	10 25 25	10 25 25	25 25 25	25 25 25
Lanes:	1 0 3 1 0	1 0 3 0 1	2 0 1 1 0	0 0 1 0 0

Volume Module:

Base Vol:	9 1541 21	48 1364 258	237 2 20	15 1 50
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	9 1541 21	48 1364 258	237 2 20	15 1 50
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	9 1622 22	51 1436 272	249 2 21	16 1 53
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	9 1622 22	51 1436 272	249 2 21	16 1 53
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	9 1622 22	51 1436 272	249 2 21	16 1 53

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.91 0.91	0.95 0.91 0.85	0.92 0.95 0.81	0.79 0.79 0.79
Lanes:	1.00 3.95 0.05	1.00 3.00 1.00	2.00 1.00 1.00	0.23 0.01 0.76
Final Sat:	1805 6810 92	1805 5187 1615	3502 1805 1534	343 21 1135

Capacity Analysis Module:

Vol/Sat:	0.00 0.24 0.24	0.03 0.28 0.17	0.07 0.00 0.01	0.05 0.05 0.05
Crit Moves:	****	****	****	****
Green/Cycle:	0.10 0.27 0.27	0.11 0.28 0.53	0.25 0.25 0.25	0.25 0.25 0.25
Volume/Cap:	0.05 0.88 0.88	0.26 0.99 0.32	0.28 0.00 0.05	0.19 0.19 0.19
Delay/Veh:	40.8 39.9 39.9	41.6 56.7 13.5	30.5 28.2 28.6	29.7 29.7 29.7
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	40.8 39.9 39.9	41.6 56.7 13.5	30.5 28.2 28.6	29.7 29.7 29.7
DesignQueue:	0 70 1	1 3 62	7 11 0	1 1 0 2

City of La Quinta
Post 2020 General Plan High Alternative
AM Peak Hour Conditions

Level Of Service Computation Report

1997 HCM Operations Method (Base Volume Alternative)

Intersection #11 Jefferson St./Hwy. 111

Cycle (sec): 82 Critical Vol./Cap. (X): 0.695
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 29.7
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 3 0 1	2 0 3 0 1	2 0 3 0 1	2 0 3 0 1

Volume Module:

Base Vol:	36 699	354 167 701	116 114 1109	28 299 1368	183
Growth Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
Initial Bse:	36 699	354 167 701	116 114 1109	28 299 1368	183
User Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
PHF Adj:	0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95
PHF Volume:	36 736	373 176 738	122 120 1167	29 315 1440	193
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0	0
Reduced Vol:	36 736	373 176 738	122 120 1167	29 315 1440	193
PCE Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
MLF Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
Final Vol:	36 736	373 176 738	122 120 1167	29 315 1440	193

Saturation Flow Module:

Sat/Lane:	1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 0.91	0.85 0.92 0.91	0.85 0.92 0.91	0.85 0.92 0.91
Lanes:	2.00 3.00	1.00 2.00 3.00	1.00 2.00 3.00	1.00 2.00 3.00
Final Sat:	3502 5187	1615 3502 5187	1615 3502 5187	1615 3502 5187

Capacity Analysis Module:

Vol/Sat:	0.01 0.14	0.23 0.05 0.14	0.08 0.03 0.22	0.02 0.09 0.28	0.12
Crit Moves:	****	****	****	****	****
Green/Cycle:	0.12 0.30	0.30 0.12 0.30	0.30 0.12 0.30	0.12 0.30 0.30	0.30
Volume/Cap:	0.09 0.47	0.76 0.41 0.47	0.25 0.28 0.74	0.06 0.74 0.91	0.39
Delay/Veh:	32.0 23.3	32.4 33.9 23.3	21.7 33.1 27.4	20.2 41.4 35.7	23.0
User DelAdj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
AdjDel/Veh:	32.0 23.3	32.4 33.9 23.3	21.7 33.1 27.4	20.2 41.4 35.7	23.0
DesignQueue:	2 24	12 7 24	4 5 39	1 13 49	6

City of La Quinta
Post 2020 General Plan High Alternative
AM Peak Hour Conditions

Level Of Service Computation Report

1997 HCM Operations Method (Base Volume Alternative)

Intersection #12 Jefferson St./Ave. 48

Cycle (sec): 90 Critical Vol./Cap. (X): 0.821
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 40.2
Optimal Cycle: 90 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Ovl	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 2 1 0	1 0 2 1 0	1 0 2 0 1	2 0 1 1 0

Volume Module:

Base Vol:	714 937	27 30 930	109 179 461	417 86 582	26
Growth Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
Initial Bse:	714 937	27 30 930	109 179 461	417 86 582	26
User Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
PHF Adj:	0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95
PHF Volume:	752 986	26 32 979	115 188 485	439 91 613	27
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0	0
Reduced Vol:	752 986	26 32 979	115 188 485	439 91 613	27
PCE Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
MLF Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
Final Vol:	752 986	26 32 979	115 188 485	439 91 613	27

Saturation Flow Module:

Sat/Lane:	1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 0.91	0.91 0.95 0.90	0.85 0.95 0.85	0.92 0.94 0.94
Lanes:	2.00 2.92	0.05 1.00 2.68	0.32 1.00 2.00	1.00 2.00 1.92
Final Sat:	3502 5024	143 1805 4567	537 1805 3610	1615 3502 3437

Capacity Analysis Module:

Vol/Sat:	0.21 0.20	0.20 0.02 0.21	0.21 0.10 0.13	0.27 0.03 0.18	0.18
Crit Moves:	****	****	****	****	****
Green/Cycle:	0.20 0.34	0.34 0.14 0.28	0.28 0.11 0.28	0.48 0.11 0.28	0.28
Volume/Cap:	1.07 0.58	0.58 0.13 0.77	0.77 0.94 0.48	0.57 0.23 0.64	0.64
Delay/Veh:	91.6 24.8	24.8 34.4 32.6	32.6 85.6 27.5	17.9 36.8 30.0	30.0
User DelAdj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
AdjDel/Veh:	91.6 24.8	24.8 34.4 32.6	32.6 85.6 27.5	17.9 36.8 30.0	30.0
DesignQueue:	32 34	1 1 37	4 9 18	12 4 23	1

City of La Quinta
Post 2020 General Plan High Alternative
AM Peak Hour Conditions

Level of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #13 Jefferson St./Ave. 50

Cycle (sec): 97 Critical Vol./Cap. (X): 0.559
Loss Time (sec): 12 (Y+R = -4 sec) Average Delay (sec/veh): 31.5
Optimal Cycle: 97 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Split Phase	Split Phase
Rights:	Include	Ovl	Include	Include
Min. Green:	10 25 25	10 25 25	25 25 25	25 25 25
Lanes:	2 0 3 0 1	2 0 3 0 1	1 1 1 0 1	1 1 1 0 1

Volume Module:

Base Vol:	85	906	26	117	789	386	343	350	69	51	456	257
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	85	906	26	117	789	386	343	350	69	51	456	257
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	89	954	27	123	831	406	361	368	73	54	480	271
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	89	954	27	123	831	406	361	368	73	54	480	271
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	89	954	27	123	831	406	361	368	73	54	480	271

Saturation Flow Module:

Sat Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.85	0.92	0.91	0.85	0.90	0.95	0.85	0.90	0.95	0.85
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.52	1.48	1.00	1.00	2.00	1.00
Final Sat:	3502	5187	1615	3502	5187	1615	2613	2664	1615	1715	3610	1615

Capacity Analysis Module:

Vol/Sat:	0.03	0.18	0.02	0.04	0.16	0.25	0.14	0.14	0.05	0.03	0.13	0.17
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.10	0.26	0.26	0.10	0.26	0.52	0.26	0.26	0.26	0.26	0.26	0.26
Volume/Cap:	0.25	0.71	0.06	0.34	0.62	0.49	0.54	0.54	0.18	0.12	0.52	0.65
Delay/Veh:	40.4	34.6	27.2	41.0	32.7	15.7	31.4	31.4	28.2	27.6	31.3	35.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Del/Veh:	40.4	34.6	27.2	41.0	32.7	15.7	31.4	31.4	28.2	27.6	31.3	35.8
Design Queue:	4	40	1	6	35	11	15	15	3	2	20	11

City of La Quinta
Post 2020 General Plan High Alternative
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Level of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #15 Madison St. Ave. 50

Cycle (sec): 108 Critical Vol./Cap. (X): 0.887
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 46.6
Optimal Cycle: 108 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	41	683	84	352	490	47	86	367	10	96	590	395
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	41	683	84	352	490	47	86	367	10	96	590	395
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	43	719	88	371	516	49	91	386	11	101	621	416
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	43	719	88	371	516	49	91	386	11	101	621	416
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	43	719	88	371	516	49	91	386	11	101	621	416

Saturation Flow Module:

Sat Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.94	0.94	0.95	0.95	0.95	0.95	0.89	0.89
Lanes:	1.00	1.78	0.22	1.00	1.83	0.17	1.00	1.94	0.06	1.00	1.20	0.80
Final Sat:	1805	3165	387	1805	3254	309	1805	3496	100	1805	2032	1361

Capacity Analysis Module:

Vol/Sat:	0.02	0.23	0.23	0.21	0.16	0.16	0.05	0.11	0.11	0.06	0.31	0.31
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.13	0.25	0.25	0.22	0.33	0.33	0.09	0.30	0.30	0.12	0.33	0.33
Volume/Cap:	0.18	0.93	0.93	0.93	0.48	0.48	0.54	0.37	0.37	0.46	0.93	0.93
Delay/Veh:	41.9	55.5	55.5	68.7	28.8	28.8	50.5	29.8	29.8	45.8	47.9	47.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Del/Veh:	41.9	55.5	55.5	68.7	28.8	28.8	50.5	29.8	29.8	45.8	47.9	47.9
Design Queue:	2	35	4	18	21	2	5	17	0	5	27	18

City of La Quinta
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AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #16 Madison St./Ave. 52

Cycle (sec): 82 Critical Vol./Cap. (X): 0.677
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 32.6
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	118 616 25	2 479 86	104 536 167	27 736 21
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	118 616 25	2 479 86	104 536 167	27 736 21
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	229 648 26	2 504 91	109 564 176	28 775 22
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	229 648 26	2 504 91	109 564 176	28 775 22
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	229 648 26	2 504 91	109 564 176	28 775 22

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.94 0.94	0.95 0.93 0.93	0.95 0.92 0.92	0.95 0.95 0.95
Lanes:	1.00 1.92 0.08	1.00 1.63 0.31	1.00 1.52 0.48	1.00 1.94 0.06
Final Sat:	1805 1805 1556	1805 2329 1107	1805 3423 162	1805 2469 985

Capacity Analysis Module:

Vol/Sat:	0.13 0.19 0.19	0.00 0.17 0.17	0.06 0.21 0.21	0.02 0.22 0.22
Crit Moves:	****	****	****	****
Green/Cycle:	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30
Volume/Cap:	0.04 0.62 0.62	0.01 0.55 0.55	0.50 0.70 0.70	0.13 0.73 0.73
Delay/Veh:	31.7 25.5 25.5	31.7 24.5 24.5	35.4 27.2 27.2	32.4 27.9 27.9
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	31.7 25.5 25.5	31.7 24.5 24.5	35.4 27.2 27.2	32.4 27.9 27.9
DesignQueue:	9 22 1	0 17 3	4 19 6	1 26 1

City of La Quinta
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AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #17 Jackson St./Airport Blvd.

Cycle (sec): 82 Critical Vol./Cap. (X): 0.699
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 32.9
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	95 332 286	195 116 55	39 621 29	86 626 250
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	95 332 286	195 116 55	39 621 29	86 626 250
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	100 349 301	205 122 58	41 654 31	91 659 263
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	100 349 301	205 122 58	41 654 31	91 659 263
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	100 349 301	205 122 58	41 654 31	91 659 263

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.88 0.88	0.95 0.90 0.90	0.95 0.94 0.94	0.95 0.91 0.91
Lanes:	1.00 1.07 0.93	1.00 1.36 0.64	1.00 1.91 0.09	1.00 1.43 0.57
Final Sat:	1805 1805 1556	1805 2329 1107	1805 3423 162	1805 2469 985

Capacity Analysis Module:

Vol/Sat:	0.06 0.19 0.19	0.11 0.05 0.05	0.02 0.19 0.19	0.05 0.27 0.27
Crit Moves:	****	****	****	****
Green/Cycle:	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30
Volume/Cap:	0.45 0.63 0.63	0.93 0.17 0.17	0.19 0.63 0.63	0.41 0.88 0.88
Delay/Veh:	35.0 25.9 25.9	77.6 21.0 21.0	32.8 25.7 25.7	34.5 35.4 35.4
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	35.0 25.9 25.9	77.6 21.0 21.0	32.8 25.7 25.7	34.5 35.4 35.4
DesignQueue:	4 12 10	8 4 2	2 22 1	4 22 9

City of La Quinta
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Level of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #18 Harrison St./Airport Blvd.

Cycle (sec): 95 Critical Vol./Cap. (X): 0.717
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 46.6
Optimal Cycle: 95 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	66 1568 180	17 1140 210	275 649 90	93 327 4
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	66 1568 180	17 1140 210	275 649 90	93 327 4
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	63 1489 169	16 1020 211	260 603 81	88 314 4
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	63 1489 169	16 1020 211	260 603 81	88 314 4
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	63 1489 169	16 1020 211	260 603 81	88 314 4

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.90 0.90	0.95 0.89 0.89	0.95 0.93 0.93	0.95 0.95 0.95
Lanes:	1.00 2.69 0.31	1.00 2.53 0.47	1.00 1.76 0.24	1.00 1.98 0.02
Final Sat:	1805 4584 525	1805 4280 788	1805 3112 433	1805 3561 41

Capacity Analysis Module:

Vol/Sat:	1.04 0.36 0.36	0.01 0.28 0.28	0.16 0.22 0.22	0.05 0.10 0.10
Crit Moves:	****	****	****	****
Green/Cycle:	0.11 0.35 0.35	0.11 0.35 0.35	0.16 0.30 0.30	0.12 0.26 0.26
Volume/Cap:	0.36 1.03 1.03	0.09 0.80 0.80	1.03 0.73 0.73	0.45 0.37 0.37
Delay/Veh:	40.7 60.2 60.2	38.6 30.6 30.6	101.7 32.6 32.6	40.4 28.8 28.8
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	40.7 60.2 60.2	38.6 30.6 30.6	101.7 32.6 32.6	40.4 28.8 28.8
DesignQueue:	3 62 7	1 44 8	13 27 4	5 14 0

City of La Quinta
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Level of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #19 Grapefruit Blvd./Airport Blvd.

Cycle (sec): 101 Critical Vol./Cap. (X): 0.878
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 50.2
Optimal Cycle: 101 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 1 1 0	1 0 1 1 0	1 0 3 0 1	2 0 2 1 0

Volume Module:

Base Vol:	217 733 472	30 672 177	261 762 320	578 801 98
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	217 733 472	30 672 177	261 762 320	578 801 98
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	207 702 447	28 607 166	248 702 317	540 741 90
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	207 702 447	28 607 166	248 702 317	540 741 90
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	207 702 447	28 607 166	248 702 317	540 741 90

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 0.89 0.89	0.95 0.92 0.92	0.95 0.91 0.85	0.92 0.90 0.90
Lanes:	0.10 1.22 0.78	1.00 1.58 0.42	1.00 3.00 1.00	2.00 2.67 0.33
Final Sat:	1802 2067 1330	1805 2769 729	1805 5187 1615	3502 4548 556

Capacity Analysis Module:

Vol/Sat:	1.07 0.37 0.37	0.02 0.26 0.26	0.15 0.15 0.21	0.17 0.19 0.19
Crit Moves:	****	****	****	****
Green/Cycle:	0.10 0.37 0.37	0.10 0.37 0.37	0.17 0.25 0.25	0.17 0.25 0.25
Volume/Cap:	0.66 1.02 1.02	0.18 0.70 0.70	0.90 0.62 0.84	1.02 0.75 0.75
Delay/Veh:	48.4 63.7 63.7	42.2 29.1 29.1	68.3 34.8 51.1	84.9 37.6 37.6
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	48.4 63.7 63.7	42.2 29.1 29.1	68.3 34.8 51.1	84.9 37.6 37.6
DesignQueue:	12 30 19	2 27 7	13 35 15	30 37 5

City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #20 Grapefruit Blvd./Ave. 62

Cycle (sec): 62 Critical Vol./Cap. (X): 0.559
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 44.3
Optimal Cycle: 62 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	151 480 80	76 238 78	140 254 123	258 179 116
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	151 480 80	76 238 78	140 254 123	258 179 116
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	161 505 84	80 251 82	147 267 129	272 188 122
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	161 505 84	80 251 82	147 267 129	272 188 122
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	161 505 84	80 251 82	147 267 129	272 188 122

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.93 0.93	0.95 0.91 0.91	0.95 0.90 0.90	0.95 0.89 0.89
Lanes:	1.00 1.71 0.29	1.00 1.51 0.49	1.00 1.35 0.65	1.00 1.21 0.79
Final Sat:	1805 3030 504	1805 2620 856	1805 2315 1118	1805 2060 1337

Capacity Analysis Module:

Vol/Sat:	0.09 0.17 0.17	0.04 0.10 0.10	0.08 0.12 0.12	0.15 0.09 0.09
Crit Moves:	****	****	****	****
Green/Cycle:	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30
Volume/Cap:	0.73 0.55 0.55	0.36 0.31 0.31	0.57 0.38 0.38	1.24 0.30 0.30
Delay/Veh:	45.5 24.4 24.4	34.1 22.1 22.1	42.1 22.6 22.6	174.8 22.0 22.0
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	45.5 24.4 24.4	34.1 22.1 22.1	42.1 22.6 22.6	174.8 22.0 22.0
DesignQueue:	7 17 3	3 8 3	6 9 4	11 6 4

City of La Quinta
Post 2020 General Plan High Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #1 Washington St./Country Club Dr.

Cycle (sec): 120 Critical Vol./Cap. (X): 0.929
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 48.1
Optimal Cycle: 120 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Ovl	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 3 1 0	1 0 4 0 1	2 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	159 1435 29	81 1606 928	947 422 143	31 413 53
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	159 1435 29	81 1606 928	947 422 143	31 413 53
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	167 1511 31	85 1691 977	997 444 151	33 435 56
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	167 1511 31	85 1691 977	997 444 151	33 435 56
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	167 1511 31	85 1691 977	997 444 151	33 435 56

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.91 0.91	0.95 0.91 0.85	0.92 0.91 0.91	0.95 0.93 0.93
Lanes:	1.00 3.92 0.08	1.00 4.00 1.00	2.00 1.49 0.51	1.00 1.77 0.23
Final Sat:	1805 6757 139	1805 6916 1615	3502 2591 881	1805 3144 405

Capacity Analysis Module:

Vol/Sat:	0.09 0.22 0.22	0.05 0.24 0.60	0.28 0.17 0.17	0.02 0.14 0.14
Crit Moves:	****	****	****	****
Green/Cycle:	0.09 0.33 0.33	0.08 0.32 0.60	0.28 0.35 0.35	0.14 0.21 0.21
Volume/Cap:	1.01 0.69 0.69	0.57 0.77 1.01	1.01 0.49 0.49	0.13 0.66 0.66
Delay/Veh:	126.6 36.0 36.0	57.8 38.7 55.0	73.8 30.9 30.9	45.4 45.9 45.9
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	126.6 36.0 36.0	57.8 38.7 55.0	73.8 30.9 30.9	45.4 45.9 45.9
DesignQueue:	10 72 1	5 82 30	51 20 7	2 24 3

City of La Quinta
Post 2020 General Plan High Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #2 Washington St./Hovley Ln.-42nd Ave.

Cycle (sec): 120 Critical Vol./Cap. (X): 0.983
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 55.8
Optimal Cycle: 100 Level Of Service: E

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 10 25 25 10 25 25 10 25 25 10 25 25
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 1 0

Volume Module:

Base Vol:	120 1280	87	195 1436	190	237 721	178	68 798	146
Growth Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
Initial Bse:	120 1280	87	195 1436	190	237 721	178	68 798	146
User Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
PHF Adj:	0.95 0.95	0.95	0.95 0.95	0.95	0.95 0.95	0.95	0.95 0.95	0.95
PHF Volume:	232 1347	92	205 1512	200	249 759	187	72 840	154
Reduced Vol:	0 0 0	0	0 0 0	0	0 0 0	0	0 0 0	0
Reduced Vol:	232 1347	92	205 1512	200	249 759	187	72 840	154
PCE Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
MLF Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
Final Vol:	232 1347	92	205 1512	200	249 759	187	72 840	154

Saturation Flow Module:

Sat/Lane:	1900 1900	1900	1900 1900	1900	1900 1900	1900	1900 1900	1900
Adjustment:	0.95 0.90	0.90	0.95 0.89	0.89	0.95 0.92	0.92	0.95 0.93	0.93
Lanes:	1.00 2.81	0.19	1.00 2.65	0.35	1.00 1.60	0.40	1.00 1.69	0.31
Final Sat:	1805 4807	328	1805 4499	595	1805 2810	692	1805 2981	546

Capacity Analysis Module:

Vol/Sat:	0.13 0.28	0.28	0.11 0.34	0.34	0.14 0.27	0.27	0.04 0.28	0.28
Crit Moves:	****		****		****		****	
Green/Cycle:	0.13 0.34	0.34	0.14 0.34	0.34	0.14 0.34	0.34	0.08 0.29	0.29
Volume/Cap:	0.98 0.83	0.83	0.83 0.98	0.98	0.98 0.79	0.79	0.48 0.98	0.98
Delay/Veh:	105.5 40.3	40.3	71.4 56.7	56.7	102.9 38.9	38.9	54.9 66.5	66.5
User DelAdj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
AdjDel/Veh:	105.5 40.3	40.3	71.4 56.7	56.7	102.9 38.9	38.9	54.9 66.5	66.5
DesignQueue:	14 64	4	12 72	10	15 36	9	4 43	8

City of La Quinta
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PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #3 Washington St./Fred Waring Dr.

Cycle (sec): 120 Critical Vol./Cap. (X): 0.974
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 52.9
Optimal Cycle: 120 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Ignore Include
Min. Green: 10 25 25 10 25 25 10 25 25 10 25 25
Lanes: 2 0 2 1 0 1 0 3 0 1 1 0 3 0 1 1 0 2 1 0

Volume Module:

Base Vol:	1086 1469	40	56 1325	151	169 1291	1258	53 1306	53
Growth Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	0.00	1.00 1.00	1.00
Initial Bse:	1086 1469	40	56 1325	151	169 1291	0	53 1306	53
User Adj:	0.95 0.95	0.95	0.95 0.95	0.95	0.95 0.95	0.00	0.95 0.95	0.95
PHF Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	0.00	1.00 1.00	1.00
PHF Volume:	1032 1396	38	53 1259	143	161 1226	0	50 1241	50
Reduced Vol:	0 0 0	0	0 0 0	0	0 0 0	0	0 0 0	0
Reduced Vol:	1032 1396	38	53 1259	143	161 1226	0	50 1241	50
PCE Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	0.00	1.00 1.00	1.00
MLF Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	0.00	1.00 1.00	1.00
Final Vol:	1032 1396	38	53 1259	143	161 1226	0	50 1241	50

Saturation Flow Module:

Sat/Lane:	1900 1900	1900	1900 1900	1900	1900 1900	1900	1900 1900	1900
Adjustment:	0.92 0.91	0.91	0.95 0.91	0.85	0.95 0.91	1.00	0.95 0.90	0.90
Lanes:	2.00 2.92	0.08	1.00 3.00	1.00	1.00 3.00	1.00	1.00 2.88	0.12
Final Sat:	3502 5029	137	1805 5187	1615	1805 5187	1900	1805 4956	200

Capacity Analysis Module:

Vol/Sat:	0.29 0.28	0.28	0.03 0.24	0.09	0.09 0.24	0.00	0.03 0.25	0.25
Crit Moves:	****		****		****		****	
Green/Cycle:	0.30 0.47	0.47	0.08 0.25	0.25	0.09 0.27	0.00	0.08 0.26	0.26
Volume/Cap:	0.97 0.59	0.59	0.35 0.97	0.36	0.97 0.89	0.00	0.33 0.97	0.97
Delay/Veh:	63.0 23.9	23.9	53.4 63.8	37.7	116.6 50.1	0.0	53.2 63.0	63.0
User DelAdj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
AdjDel/Veh:	63.0 23.9	23.9	53.4 63.8	37.7	116.6 50.1	0.0	53.2 63.0	63.0
DesignQueue:	52 53	1	3 67	7	10 64	0	3 65	3

City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #4 Washington St./Miles Ave.

Cycle (sec): 120 Critical Vol./Cap. (X): 0.932
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 51.0
Optimal Cycle: 120 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 2 1 0	2 0 2 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	256 2332 101	329 2268 3	28 235 223	47 516 226
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	256 2332 101	329 2268 3	28 235 223	47 516 226
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	259 2455 106	346 2387 3	29 247 235	49 543 238
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	259 2455 106	346 2387 3	29 247 235	49 543 238
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	259 2455 106	346 2387 3	29 247 235	49 543 238

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 0.90 0.90	0.92 0.91 0.91	0.95 0.88 0.88	0.95 0.91 0.91
Lanes:	2.00 2.88 0.12	2.00 2.99 0.01	1.00 1.02 0.98	1.00 1.39 0.61
Final Sat:	3502 4942 213	3502 5180 7	1805 1715 1632	1805 2394 1049

Capacity Analysis Module:

Vol/Sat:	0.08 0.50 0.50	0.10 0.46 0.46	0.02 0.14 0.14	0.03 0.23 0.23
Crit Moves:	****	****	****	****
Green/Cycle:	0.16 0.49 0.49	0.10 0.51 0.51	0.08 0.22 0.22	0.09 0.23 0.23
Volume/Cap:	0.92 1.01 1.01	0.91 0.91 0.91	0.19 0.65 0.65	0.31 1.01 1.01
Delay/Veh:	87.5 49.9 49.9	104.4 32.0 32.0	51.9 44.7 44.7	52.4 80.5 80.5
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	87.5 49.9 49.9	104.4 32.0 32.0	51.9 44.7 44.7	52.4 80.5 80.5
DesignQueue:	17 94 4	21 88 0	2 13 13	3 30 13

City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #5 Washington St./Hwy. 111.

Cycle (sec): 101 Critical Vol./Cap. (X): 0.878
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 45.3
Optimal Cycle: 101 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Ovl	Ovl
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 3 1 0	2 0 3 1 0	1 0 4 0 1	1 0 3 0 1

Volume Module:

Base Vol:	744 1720 16	629 1658 113	156 987 754	16 1109 629
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	744 1720 16	629 1658 113	156 987 754	16 1109 629
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	783 1811 17	662 1745 119	164 1039 794	17 1167 662
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	783 1811 17	662 1745 119	164 1039 794	17 1167 662
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	783 1811 17	662 1745 119	164 1039 794	17 1167 662

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 0.91 0.91	0.92 0.90 0.90	0.95 0.91 0.85	0.95 0.91 0.85
Lanes:	2.00 3.96 0.04	2.00 3.74 0.26	1.00 4.00 1.00	1.00 3.00 1.00
Final Sat:	3502 6845 64	3502 6410 437	1805 6916 1615	1805 5187 1615

Capacity Analysis Module:

Vol/Sat:	0.22 0.26 0.26	0.19 0.27 0.27	0.09 0.15 0.49	0.01 0.22 0.41
Crit Moves:	****	****	****	****
Green/Cycle:	0.23 0.30 0.30	0.21 0.28 0.28	0.11 0.27 0.50	0.10 0.27 0.48
Volume/Cap:	0.98 0.89 0.89	0.89 0.98 0.98	0.85 0.55 0.98	0.10 0.84 0.86
Delay/Veh:	64.7 39.5 39.5	51.9 51.5 51.5	72.9 31.6 50.3	41.6 39.9 32.7
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	64.7 39.5 39.5	51.9 51.5 51.5	72.9 31.6 50.3	41.6 39.9 32.7
DesignQueue:	36 76 1	31 76 5	8 44 25	1 51 21

City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #6 Washington St./Eisenhower Dr.

Cycle (sec): 115 Critical Vol./Cap. (X): 0.641
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 49.9
Optimal Cycle: 115 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Split Phase	Split Phase
Rights:	Include	Ovl	Include	Include
Min. Green:	10 25 25	10 25 25	25 25 25	25 25 25
Lanes:	1 0 3 1 0	1 0 3 0 1	2 0 1 1 0	0 0 1 0 0

Volume Module:

Base Vol:	19 1941	31	47 1958	388	397	4	12	25	3	40
Growth Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00	1.00 1.00	1.00	1.00
Initial Bse:	19 1941	31	47 1958	388	397	4	12	25	3	40
User Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00	1.00 1.00	1.00	1.00
PHF Adj:	0.95 0.95	0.95	0.95 0.95	0.95	0.95 0.95	0.95	0.95	0.95 0.95	0.95	0.95
PHF Volume:	20 2043	33	49 2061	408	418	4	13	26	3	42
Reduced Vol:	0 0 0	0	0 0 0	0	0 0 0	0	0	0 0 0	0	0
Reduced Vol:	20 2043	33	49 2061	408	418	4	13	26	3	42
PCE Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00	1.00 1.00	1.00	1.00
MLF Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00	1.00 1.00	1.00	1.00
Final Vol:	20 2043	33	49 2061	408	418	4	13	26	3	42

Saturation Flow Module:

Sat/Lane:	1900 1900	1900	1900 1900	1900	1900 1900	1900	1900 1900	1900	1900 1900	1900
Adjustment:	0.95 0.91	0.91	0.95 0.91	0.85	0.92 0.95	0.81	0.81 0.81	0.81	0.95 0.95	0.85
Lanes:	1.00 3.00	0.06	1.00 3.00	1.00	2.00 1.00	1.00	0.37 0.04	0.59	1.00 2.00	1.00
Final Sat:	1805 6792	110	1805 5187	1615	3502 1805	1534	560	65	905	

Capacity Analysis Module:

Vol/Sat:	0.01 0.30	0.30	0.03 0.40	0.25	0.12 0.00	0.01	0.05 0.05	0.05
Crit Moves:	****		****		****		****	
Green/Cycle:	0.09 0.37	0.37	0.09 0.37	0.59	0.22 0.22	0.22	0.22 0.22	0.22
Volume/Cap:	0.13 0.80	0.80	0.31 1.06	0.43	0.55 0.01	0.04	0.21 0.21	0.21
Delay/Veh:	48.8 34.2	34.2	50.4 75.4	13.2	40.8 35.3	35.6	37.3 37.3	37.3
Peak Del Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
Adj Del/Veh:	48.8 34.2	34.2	50.4 75.4	13.2	40.8 35.3	35.6	37.3 37.3	37.3
Design Queue:	1 48	1	5 81	11	22	0	1	0 2

City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #7 Washington St./Ave. 50

Cycle (sec): 103 Critical Vol./Cap. (X): 0.881
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 48.2
Optimal Cycle: 103 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Ovl	Include	Ovl
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 3 0 1	2 0 3 0 1	1 0 2 0 1	1 0 2 0 1

Volume Module:

Base Vol:	127 1079	188	320 1129	526	546	532	136	219	496	348
Growth Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
Initial Bse:	127 1079	188	320 1129	526	546	532	136	219	496	348
User Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
PHF Adj:	0.95 0.95	0.95	0.95 0.95	0.95	0.95 0.95	0.95	0.95 0.95	0.95	0.95 0.95	0.95
PHF Volume:	134 1136	198	337 1188	554	575	560	143	231	522	366
Reduced Vol:	0 0 0	0	0 0 0	0	0 0 0	0	0 0 0	0	0 0 0	0
Reduced Vol:	134 1136	198	337 1188	554	575	560	143	231	522	366
PCE Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
MLF Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
Final Vol:	134 1136	198	337 1188	554	575	560	143	231	522	366

Saturation Flow Module:

Sat/Lane:	1900 1900	1900	1900 1900	1900	1900 1900	1900	1900 1900	1900	1900 1900	1900
Adjustment:	0.95 0.91	0.85	0.92 0.91	0.85	0.95 0.95	0.85	0.95 0.95	0.85	0.95 0.95	0.85
Lanes:	1.00 3.00	1.00	2.00 3.00	1.00	1.00 2.00	1.00	1.00 2.00	1.00	1.00 2.00	1.00
Final Sat:	1805 5187	1615	3502 5187	1615	1805 3610	1615	1805 3610	1615	1805 3610	1615

Capacity Analysis Module:

Vol/Sat:	1.07 0.22	0.12	0.10 0.23	0.34	0.32 0.16	0.09	0.13 0.14	0.23
Crit Moves:	****		****		****		****	
Green/Cycle:	0.10 0.24	0.24	0.10 0.24	0.54	0.30 0.24	0.24	0.30 0.24	0.34
Volume/Cap:	0.76 0.90	0.51	0.99 0.94	0.63	1.06 0.64	0.36	0.43 0.60	0.67
Delay/Veh:	31.5 47.0	34.7	92.8 52.3	17.8	91.0 36.6	33.0	29.4 35.6	32.2
Peak Del Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00	1.00 1.00	1.00
Adj Del/Veh:	31.5 47.0	34.7	92.8 52.3	17.8	91.0 36.6	33.0	29.4 35.6	32.2
Design Queue:	7 52	9	18 54	16	25 25	6	10 23	15

City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #8 Jefferson St./Country Club Dr.

Cycle (sec): 120 Critical Vol./Cap. (X): 0.943
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 56.4
Optimal Cycle: 120 Level Of Service: E

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L T R	L T R	L T R	L T R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Ignore	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 2 1 0	1 0 2 0 1	2 0 1 0 1	1 0 0 1 0

Volume Module:

Base Vol:	388	1190	148	24	935	846	934	220	400	136	304	17
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	388	1190	148	24	935	0	934	220	400	136	304	17
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	369	1125	141	23	884	0	883	212	421	143	320	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	408	1253	156	25	984	0	983	232	421	143	320	18
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	408	1253	156	25	984	0	983	232	421	143	320	18

Saturation Flow Module:

Adj Factor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adjustment:	0.92	0.89	0.89	0.95	0.95	1.00	0.92	1.00	0.85	0.95	0.99	0.99
Lanes:	2.00	2.67	0.33	1.00	2.00	1.00	2.00	1.60	1.00	1.00	0.95	0.05
Final Sat:	3502	4534	565	1805	3610	1900	3502	1900	1615	1805	1784	100

Capacity Analysis Module:

Vol/Sat:	0.12	0.28	0.28	0.01	0.27	0.00	0.28	0.12	0.26	0.08	0.18	0.18
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.12	0.32	0.32	0.08	0.28	0.00	0.29	0.41	0.41	0.08	0.21	0.21
Volume/Cap:	0.97	0.87	0.87	0.17	0.97	0.00	0.97	0.29	0.63	0.95	0.86	0.86
Delay/Veh:	88.1	43.8	43.8	51.6	63.5	0.0	63.0	23.6	29.7	113.2	63.1	63.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	88.1	43.8	43.8	51.6	63.5	0.0	63.0	23.6	29.7	113.2	63.1	63.1
DesignQueue:	25	61	8	2	51	0	50	9	17	9	18	1

City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #9 Jefferson St./Ave. 44

Cycle (sec): 120 Critical Vol./Cap. (X): 0.908
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 49.0
Optimal Cycle: 120 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L T R	L T R	L T R	L T R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 2 0 1	1 0 2 0 1

Volume Module:

Base Vol:	71	1499	43	1	1281	240	221	899	185	95	1132	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	71	1499	43	1	1281	240	221	899	185	95	1132	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	75	1578	45	1	1348	253	233	946	195	100	1192	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	75	1578	45	1	1348	253	233	946	195	100	1192	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	75	1578	45	1	1348	253	233	946	195	100	1192	1

Saturation Flow Module:

Adj Factor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adjustment:	0.95	0.91	0.91	0.95	0.89	0.89	0.95	0.95	0.85	0.95	0.95	0.85
Lanes:	1.00	2.52	0.38	1.00	2.53	0.47	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat:	1205	5023	143	1905	4263	800	1805	3610	1615	1805	3610	1615

Capacity Analysis Module:

Vol/Sat:	0.04	0.31	0.31	0.00	0.32	0.32	0.13	0.26	0.12	0.06	0.33	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.08	0.33	0.33	0.08	0.33	0.33	0.14	0.40	0.40	0.08	0.35	0.35
Volume/Cap:	0.50	0.94	0.94	0.01	0.95	0.95	0.95	0.65	0.30	0.66	0.95	0.00
Delay/Veh:	55.2	50.0	50.0	50.5	51.1	51.1	95.0	30.3	24.8	64.1	53.1	25.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.2	50.0	50.0	50.5	51.1	51.1	95.0	30.3	24.8	64.1	53.1	25.5
DesignQueue:	5	76	2	0	65	12	14	40	8	6	57	0

City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #10 Jefferson St./Miles Ave.

Cycle (sec): 120 Critical Vol./Cap. (X): 0.904
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 47.9
Optimal Cycle: 120 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control Rights:	Protected Include			Protected Include			Protected Include			Protected Ignore		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	2	1	0	2	1	0	2	1	0	1

Volume Module:

Base Vol:	278	1185	24	146	1322	94	279	438	88	83	358	148
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Initial Bse:	278	1185	24	146	1322	94	279	438	88	83	358	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	293	1247	25	154	1392	99	294	461	93	87	377	0
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	293	1247	25	154	1392	99	294	461	93	87	377	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol:	293	1247	25	154	1392	99	294	461	93	87	377	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.90	0.90	0.95	1.00	0.85	0.95	1.00	1.00
Lanes:	1.00	2.94	0.06	1.00	2.80	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat:	1805	5070	102	1805	4794	341	1805	1900	1615	1805	1900	1900

Capacity Analysis Module:

Vol/Sat:	0.16	0.25	0.25	0.09	0.29	0.29	0.16	0.24	0.06	0.05	0.20	0.00
Crit Moves:	0.18	0.37	0.37	0.13	0.32	0.32	0.18	0.32	0.32	0.08	0.22	0.00
Green/Cycle:	0.90	0.66	0.66	0.66	0.90	0.90	0.90	0.77	0.18	0.58	0.90	0.00
Volume/Cap:	0.90	0.66	0.66	0.66	0.90	0.90	0.90	0.77	0.18	0.58	0.90	0.00
Delay/Veh:	75.5	32.3	32.3	56.7	46.4	46.4	75.4	43.0	29.9	58.5	68.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	75.5	32.3	32.3	56.7	46.4	46.4	75.4	43.0	29.9	58.5	68.3	0.0
DesignQueue:	17	56	1	9	68	5	17	22	4	5	21	0

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #11 Jefferson St./Hwy. 111

Cycle (sec): 82 Critical Vol./Cap. (X): 0.803
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 40.7
Optimal Cycle: 82 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control Rights:	Protected Include			Protected Include			Protected Include			Protected Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	2	5	3	0	1	2	0	3	0	1	2	0

Volume Module:

Base Vol:	105	1094	298	169	1118	119	105	1517	127	350	1520	161
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	105	1094	298	169	1118	119	105	1517	127	350	1520	161
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	111	1152	314	178	1177	125	111	1597	134	368	1600	169
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	1152	314	178	1177	125	111	1597	134	368	1600	169
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	111	1152	314	178	1177	125	111	1597	134	368	1600	169

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.85	0.92	0.91	0.85	0.92	0.91	0.85	0.92	0.91	0.85
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat:	3502	5187	1615	3502	5187	1615	3502	5187	1615	3502	5187	1615

Capacity Analysis Module:

Vol/Sat:	0.03	0.22	0.19	0.05	0.23	0.08	0.03	0.31	0.08	0.11	0.31	0.10
Crit Moves:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30
Green/Cycle:	0.26	0.73	0.64	0.42	0.74	0.25	0.26	1.01	0.27	0.86	1.01	0.34
Volume/Cap:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30
Delay/Veh:	35.1	27.2	27.4	34.0	27.6	21.7	33.0	53.6	21.9	51.6	54.1	22.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.1	27.2	27.4	34.0	27.6	21.7	33.0	53.6	21.9	51.6	54.1	22.5
DesignQueue:	4	39	10	7	39	4	4	55	4	15	55	5

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #12 Jefferson St./Ave. 48

Cycle (sec): 107 Critical Vol./Cap. (X): 0.886
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 39.7
Optimal Cycle: 107 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Ovl	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 2 1 0	1 0 2 1 0	1 0 2 0 1	2 0 1 1 0

Volume Module:

Base Vol:	502	1318	46	77	1398	179	147	723	530	42	659	97
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	502	1318	46	77	1398	179	147	723	530	42	659	97
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	528	1387	48	81	1472	188	155	761	558	44	694	102
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	528	1387	48	81	1472	188	155	761	558	44	694	102
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	528	1387	48	81	1472	188	155	761	558	44	694	102

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.91	0.95	0.89	0.89	0.95	0.95	0.85	0.92	0.93	0.93
Lanes:	2.00	2.90	0.10	1.00	2.66	0.34	1.00	2.00	1.00	2.00	1.74	0.26
Final Sat:	3502	4988	173	1805	4521	577	1805	3610	1615	3502	3088	454

Capacity Analysis Module:

Vol/Sat:	0.15	0.28	0.28	0.04	0.33	0.33	0.09	0.21	0.35	0.01	0.22	0.22
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.17	0.44	0.44	0.09	0.37	0.37	0.10	0.25	0.42	0.10	0.25	0.25
Volume/Cap:	0.39	0.63	0.63	0.48	0.89	0.89	0.89	0.84	0.82	0.13	0.89	0.89
Delay/Veh:	22.3	23.5	23.5	48.2	37.3	37.3	85.5	45.3	35.4	44.0	49.0	49.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.3	23.5	23.5	48.2	37.3	37.3	85.5	45.3	35.4	44.0	49.0	49.0
DesignQueue:	27	49	2	4	60	8	9	36	21	2	33	5

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #13 Jefferson St./Ave. 50

Cycle (sec): 97 Critical Vol./Cap. (X): 0.778
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 36.0
Optimal Cycle: 97 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Split Phase	Split Phase
Rights:	Include	Ovl	Include	Include
Min. Green:	10 25 25	10 25 25	25 25 25	25 25 25
Lanes:	2 0 3 0 1	2 0 3 0 1	1 1 1 0 1	1 1 1 0 1

Volume Module:

Base Vol:	97	1018	78	274	1045	447	435	654	101	87	607	226
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	97	1018	78	274	1045	447	435	654	101	87	607	226
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	102	1072	82	288	1100	471	458	688	106	92	639	238
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	102	1072	82	288	1100	471	458	688	106	92	639	238
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	102	1072	82	288	1100	471	458	688	106	92	639	238

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.85	0.92	0.91	0.85	0.90	0.95	0.85	0.90	0.95	0.85
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.24	1.76	1.00	1.00	2.00	1.00
Final Sat:	3502	5187	1615	3502	5187	1615	2120	3184	1615	1715	3610	1615

Capacity Analysis Module:

Vol/Sat:	0.03	0.21	0.05	0.08	0.21	0.29	0.22	0.22	0.07	0.05	0.18	0.15
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.10	0.26	0.26	0.10	0.26	0.52	0.26	0.26	0.26	0.26	0.26	0.26
Volume/Cap:	0.28	0.80	0.20	0.80	0.82	0.57	0.84	0.84	0.25	0.21	0.69	0.57
Delay/Veh:	40.6	37.3	28.4	54.3	38.2	17.0	38.8	38.8	28.9	28.3	34.4	33.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.6	37.3	28.4	54.3	38.2	17.0	38.8	38.8	28.9	28.3	34.4	33.3
DesignQueue:	5	45	3	4	14	46	13	19	29	4	4	27

City of La Quinta
Post 2020 General Plan High Alternative
PM Peak Hour Conditions

Level of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #15 Madison St./Ave. 50

Cycle (sec): 82 Critical Vol./Cap. (X): 0.832
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 40.1
Optimal Cycle: 82 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	129	633	111	221	803	154	138	681	87	88	568	336
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	129	633	111	221	803	154	138	681	87	88	568	336
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	136	666	117	233	845	162	145	717	92	93	598	354
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	136	666	117	233	845	162	145	717	92	93	598	354
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	136	666	117	233	845	162	145	717	92	93	598	354

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.93	0.93	0.95	0.93	0.93	0.95	0.90	0.90
Lanes:	1.00	1.70	0.30	1.00	1.68	0.32	1.00	1.77	0.23	1.00	1.26	0.74
Final Sat:	1805	3003	528	1805	2957	567	1805	3145	404	1805	2141	1267

Capacity Analysis Module:

Vol/Sat:	0.08	0.22	0.22	0.13	0.29	0.29	0.08	0.23	0.23	0.05	0.28	0.28
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30
Volume/Cap:	0.62	0.73	0.73	1.06	0.94	0.94	0.66	0.75	0.75	0.42	0.92	0.92
Delay/Veh:	39.4	28.0	28.0	112.9	42.5	42.5	41.5	28.6	28.6	34.6	39.9	39.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.4	28.0	28.0	112.9	42.5	42.5	41.5	28.6	28.6	34.6	39.9	39.9
DesignQueue:	6	22	4	10	29	6	6	24	3	4	20	12

City of La Quinta
Post 2020 General Plan High Alternative
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Level of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #16 Madison St./Ave. 52

Cycle (sec): 85 Critical Vol./Cap. (X): 0.833
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 47.1
Optimal Cycle: 85 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	262	645	44	263	565	75	110	645	217	33	936	66
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	262	645	44	263	565	75	110	645	217	33	936	66
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	276	679	46	277	595	79	116	679	228	35	985	69
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	276	679	46	277	595	79	116	679	228	35	985	69
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	276	679	46	277	595	79	116	679	228	35	985	69

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.93	0.93	0.95	0.91	0.91	0.95	0.94	0.94
Lanes:	1.00	1.87	0.13	1.00	1.77	0.23	1.00	1.50	0.50	1.00	1.87	0.13
Final Sat:	1805	3351	227	1805	3130	416	1805	2600	873	1805	3340	234

Capacity Analysis Module:

Vol/Sat:	0.15	0.20	0.20	0.15	0.19	0.19	0.06	0.26	0.26	0.02	0.29	0.29
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.15	0.29	0.29	0.15	0.29	0.29	0.12	0.29	0.29	0.12	0.29	0.29
Volume/Cap:	1.00	0.69	0.69	1.00	0.65	0.65	0.55	0.89	0.89	0.16	1.00	1.00
Delay/Veh:	30.1	28.5	28.5	91.0	27.6	27.6	38.3	38.3	38.3	34.1	58.4	58.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.1	28.5	28.5	91.0	27.6	27.6	38.3	38.3	38.3	34.1	58.4	58.4
DesignQueue:	11	24	2	12	21	3	5	24	8	1	35	2

City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #17 Jackson St./Airport Blvd.

Cycle (sec): 117 Critical Vol./Cap. (X): 0.898
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 52.0
Optimal Cycle: 117 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	307	496	144	214	661	65	89	711	127	278	634	235
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	307	496	144	214	661	65	89	711	127	278	634	235
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	323	522	152	225	696	68	94	748	134	293	667	247
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	323	522	152	225	696	68	94	748	134	293	667	247
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	323	522	152	225	696	68	94	748	134	293	667	247

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.92	0.92	0.95	0.94	0.94	0.95	0.93	0.93	0.95	0.91	0.91
Lanes:	1.00	1.55	0.45	1.00	1.82	0.18	1.00	1.70	0.30	1.00	1.46	0.54
Final Sat:	1805	2701	786	1805	3246	317	1805	2991	536	1805	2529	937

Capacity Analysis Module:

Vol/Sat:	0.18	0.19	0.19	0.12	0.21	0.21	0.05	0.25	0.25	0.16	0.26	0.26
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.20	0.21	0.21	0.22	0.24	0.24	0.09	0.28	0.28	0.18	0.37	0.37
Volume/Cap:	0.90	0.90	0.90	0.56	0.90	0.90	0.61	0.90	0.90	0.90	0.71	0.71
Delay/Veh:	69.8	59.3	59.3	41.9	55.4	55.4	58.5	51.5	51.5	72.8	32.9	32.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	69.8	59.3	59.3	41.9	55.4	55.4	58.5	51.5	51.5	72.8	32.9	32.9
DesignQueue:	18	28	8	12	36	4	6	37	7	16	29	11

City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #18 Harrison St./Airport Blvd.

Cycle (sec): 82 Critical Vol./Cap. (X): 0.809
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 38.0
Optimal Cycle: 82 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	71	1103	117	3	1201	225	194	524	57	193	804	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	71	1103	117	3	1201	225	194	524	57	193	804	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	75	1161	123	3	1264	237	204	552	60	203	846	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	75	1161	123	3	1264	237	204	552	60	203	846	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	75	1161	123	3	1264	237	204	552	60	203	846	17

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.95	0.89	0.89	0.95	0.94	0.94	0.95	0.95	0.95
Lanes:	1.00	2.71	0.29	1.00	2.53	0.47	1.00	1.80	0.20	1.00	1.96	0.04
Final Sat:	1805	4624	490	1805	4263	799	1805	3207	349	1805	3528	71

Capacity Analysis Module:

Vol/Sat:	0.04	0.25	0.25	0.00	0.30	0.30	0.11	0.17	0.17	0.11	0.24	0.24
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30
Volume/Cap:	0.34	0.82	0.82	0.01	0.97	0.97	0.93	0.56	0.56	0.92	0.79	0.79
Delay/Veh:	33.9	30.1	30.1	31.7	44.9	44.9	76.4	24.6	24.6	75.4	29.9	29.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.9	30.1	30.1	31.7	44.9	44.9	76.4	24.6	24.6	75.4	29.9	29.9
DesignQueue:	3	39	4	0	43	8	8	18	2	8	28	1

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #19 Grapefruit Blvd./Airport Blvd.

Cycle (sec): 120 Critical Vol./Cap. (X): 0.930
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 56.0
Optimal Cycle: 120 Level Of Service: E

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 1 1 0	1 0 1 1 0	1 0 3 0 1	2 0 2 1 0

Volume Module:

Base Vol:	320	748	579	87	735	329	279	1030	263	496	960	64
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	320	748	579	87	735	329	279	1030	263	496	960	64
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	337	787	609	92	774	346	294	1084	277	522	1011	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	337	787	609	92	774	346	294	1084	277	522	1011	67
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	337	787	609	92	774	346	294	1084	277	522	1011	67

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.89	0.89	0.95	0.91	0.91	0.95	0.91	0.85	0.92	0.90	0.90
Lanes:	2.00	1.13	0.87	1.00	1.38	0.62	1.00	3.00	1.00	2.00	2.81	0.19
Final Sat:	3502	1903	1472	1805	2380	1064	1805	5187	1615	3502	4821	319

Capacity Analysis Module:

Vol/Sat:	0.10	0.41	0.41	0.05	0.33	0.33	0.16	0.21	0.17	0.15	0.21	0.21
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.12	0.43	0.43	0.08	0.40	0.40	0.17	0.23	0.23	0.16	0.22	0.22
Volume/Cap:	0.82	0.96	0.96	0.61	0.82	0.82	0.96	0.93	0.76	0.93	0.96	0.96
Delay/Veh:	64.2	48.9	48.9	60.3	36.6	36.6	90.8	57.7	52.3	70.9	65.0	65.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	64.2	48.9	48.9	60.3	36.6	36.6	90.8	57.7	52.3	70.9	65.0	65.0
DesignQueue:	20	33	26	6	34	15	17	59	15	30	55	4

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #20 Grapefruit Blvd./Ave. 62

Cycle (sec): 95 Critical Vol./Cap. (X): 0.768
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 47.6
Optimal Cycle: 95 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	162	317	116	148	435	139	109	255	177	461	435	118
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	162	317	116	148	435	139	109	255	177	461	435	118
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	171	334	122	156	458	146	115	268	186	485	458	124
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	171	334	122	156	458	146	115	268	186	485	458	124
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	171	334	122	156	458	146	115	268	186	485	458	124

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.92	0.92	0.95	0.89	0.89	0.95	0.92	0.92
Lanes:	1.00	1.46	0.54	1.00	1.52	0.48	1.00	1.18	0.82	1.00	1.57	0.43
Final Sat:	1805	2538	927	1805	2639	841	1805	2001	1389	1805	2750	745

Capacity Analysis Module:

Vol/Sat:	0.09	0.13	0.13	0.09	0.17	0.17	0.06	0.13	0.13	0.27	0.17	0.17
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.11	0.26	0.26	0.11	0.26	0.26	0.14	0.26	0.26	0.24	0.36	0.36
Volume/Cap:	0.90	0.50	0.50	0.82	0.66	0.66	0.44	0.51	0.51	1.11	0.46	0.46
Delay/Veh:	80.6	30.1	30.1	65.5	33.0	33.0	38.3	30.3	30.3	112.4	23.5	23.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	80.6	30.1	30.1	65.5	33.0	33.0	38.3	30.3	30.3	112.4	23.5	23.5
DesignQueue:	8	13	5	8	19	6	5	11	7	21	16	4

APPENDIX G

POST 2020 GENERAL PLAN LOW ALTERNATIVE
INTERSECTION ANALYSIS WORKSHEETS

City of La Quinta
Post 2020 General Plan Low Alternative
AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #1 Washington St./Country Club Dr.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.798
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 47.2
Optimal Cycle: 100 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Ovl	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 3 1 0	1 0 4 0 1	2 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	105 1247 30	155 1281 586	1024 279 104	23 313 52
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	105 1247 30	155 1281 586	1024 279 104	23 313 52
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	111 1313 32	163 1348 617	1078 294 109	21 329 55
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	111 1313 32	163 1348 617	1078 294 109	21 329 55
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	111 1313 32	163 1348 617	1078 294 109	21 329 55

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.91 0.91	0.95 0.91 0.85	0.92 0.91 0.91	0.95 0.93 0.93
Lanes:	1.00 1.90 0.10	1.00 4.00 1.00	2.00 1.46 0.54	1.00 1.71 0.29
Final Sat:	1805 4724 164	1805 6916 1615	3502 2528 937	1805 3028 506

Capacity Analysis Module:

Vol/Sat:	0.06 0.20 0.20	0.09 0.19 0.38	0.31 0.12 0.12	0.01 0.11 0.11
Crit Moves:	****	****	****	****
Green/Cycle:	1.10 0.25 0.25	0.10 0.25 0.53	0.28 0.38 0.38	0.15 0.25 0.25
Volume/Cap:	0.61 0.78 0.78	0.90 0.78 0.72	1.10 0.31 0.31	0.03 0.43 0.43
Delay/Veh:	45.4 37.3 37.3	85.2 37.3 20.9	95.9 22.0 22.0	36.5 31.9 31.9
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	45.4 37.3 37.3	85.2 37.3 20.9	95.9 22.0 22.0	36.5 31.9 31.9
DesignQueue:	3 57 1	8 59 18	47 10 4	1 14 2

City of La Quinta
Post 2020 General Plan Low Alternative
AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #2 Washington St./Hovley Ln.-42nd Ave.

Cycle (sec): 82 Critical Vol./Cap. (X): 0.816
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 46.5
Optimal Cycle: 82 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	267 1098 63	69 1238 111	237 400 201	58 342 78
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	267 1098 63	69 1238 111	237 400 201	58 342 78
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	281 1156 66	73 1303 117	249 421 212	61 360 82
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	281 1156 66	73 1303 117	249 421 212	61 360 82
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	281 1156 66	73 1303 117	249 421 212	61 360 82

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.90 0.90	0.95 0.90 0.90	0.95 0.90 0.90	0.95 0.92 0.92
Lanes:	1.00 2.84 0.16	1.00 2.75 0.25	1.00 1.33 0.67	1.00 1.63 0.37
Final Sat:	1805 4868 278	1805 4703 422	1805 2281 1149	1805 2858 651

Capacity Analysis Module:

Vol/Sat:	0.16 0.24 0.24	0.04 0.28 0.28	0.14 0.18 0.18	0.03 0.13 0.13
Crit Moves:	****	****	****	****
Green/Cycle:	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30
Volume/Cap:	1.28 0.78 0.78	0.33 0.91 0.91	1.13 0.61 0.61	0.28 0.41 0.41
Delay/Veh:	190.8 28.5 28.5	33.8 35.6 35.6	136.5 25.3 25.3	33.4 22.9 22.9
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	190.8 28.5 28.5	33.8 35.6 35.6	136.5 25.3 25.3	33.4 22.9 22.9
DesignQueue:	12 19 2	3 44 4	10 14 7	2 12 3

City of La Quinta
Post 2020 General Plan Low Alternative
AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #3 Washington St./Fred Waring Dr.

Cycle (sec): 82 Critical Vol./Cap. (X): 0.705
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 41.8
Optimal Cycle: 82 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Ignore Include
Min. Green: 10 25 25 10 25 25 10 25 25 10 25 25
Lanes: 2 0 2 1 0 1 0 3 0 1 1 0 2 1 0

Volume Module:
Base Vol: 558 1072 47 38 1217 135 167 869 631 38 707 45
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
Initial Bse: 558 1072 47 38 1217 135 167 869 0 38 707 45
User Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Volume: 530 1018 45 36 1156 128 159 826 0 36 672 43
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 530 1018 45 36 1156 128 159 826 0 36 672 43
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
Final Vol: 530 1018 45 36 1156 128 159 826 0 36 672 43

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 0.90 0.90 0.95 0.91 0.85 0.95 0.91 1.00 0.95 0.90 0.90
Lanes: 2.00 2.87 0.13 1.00 3.00 1.00 1.00 3.00 1.00 1.00 2.82 0.18
Final Sat: 3502 4938 218 1805 5187 1615 1805 5187 1900 1805 4831 309

Capacity Analysis Module:
Vol/Sat: 0.15 0.21 0.21 0.02 0.22 0.06 0.09 0.16 0.00 0.02 0.14 0.14
Crit Moves: ****
Green/Cycle: 0.12 0.33 0.30 0.12 0.30 0.30 0.12 0.30 0.00 0.12 0.30 0.30
Volume/Cap: 1.24 0.68 0.68 0.16 0.73 0.26 0.72 0.52 0.00 0.16 0.46 0.46
Delay/Veh: 163.0 26.1 26.1 32.6 27.3 21.8 45.8 23.9 0.0 32.6 23.2 23.2
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 163.0 26.1 26.1 32.6 27.3 21.8 45.8 23.9 0.0 32.6 23.2 23.2
DesignQueue: 22 34 1 1 39 4 7 27 0 1 22 1

City of La Quinta
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AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #4 Washington St./Miles Ave.

Cycle (sec): 85 Critical Vol./Cap. (X): 0.558
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 43.6
Optimal Cycle: 85 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 10 25 25 10 25 25 10 25 25 10 25 25
Lanes: 2 0 2 1 0 2 0 2 1 0 1 0 1 1 0

Volume Module:
Base Vol: 17 1433 48 202 1675 4 5 275 26 35 184 190
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 17 1433 48 202 1675 4 5 275 26 35 184 190
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 18 1508 51 213 1763 4 5 289 27 37 194 200
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 18 1508 51 213 1763 4 5 289 27 37 194 200
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol: 18 1508 51 213 1763 4 5 289 27 37 194 200

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 0.91 0.91 0.92 0.91 0.91 0.95 0.94 0.94 0.95 0.95 0.81
Lanes: 2.00 2.50 0.10 2.00 2.99 0.01 1.00 1.83 0.17 1.00 1.00 1.00
Final Sat: 3502 4992 169 3502 5175 12 1805 3259 304 1805 1805 1534

Capacity Analysis Module:
Vol/Sat: 0.01 0.30 0.30 0.06 0.34 0.34 0.00 0.09 0.09 0.02 0.11 0.13
Crit Moves: ****
Green/Cycle: 0.12 0.33 0.33 0.12 0.33 0.33 0.12 0.29 0.29 0.12 0.29 0.29
Volume/Cap: 1.04 0.92 0.92 0.52 1.03 1.03 0.02 0.30 0.30 0.17 0.37 0.44
Delay/Veh: 13.3 35.7 35.7 36.4 59.6 59.6 33.2 23.4 23.4 34.2 23.9 24.7
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 13.3 35.7 35.7 36.4 59.6 59.6 33.2 23.4 23.4 34.2 23.9 24.7
DesignQueue: 1 51 2 9 61 0 0 10 1 2 7 7

City of La Quinta
Post 2020 General Plan Low Alternative
AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #5 Washington St./Hwy. 111.

Cycle (sec): 106 Critical Vol./Cap. (X): 0.885
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 47.7
Optimal Cycle: 106 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Ovl	Ovl
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 3 1 0	2 0 3 1 0	1 0 4 0 1	1 0 3 0 1

Volume Module:

Base Vol:	709	944	12	457	1029	92	121	1010	932	9	784	404
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	709	944	12	457	1029	92	121	1010	932	9	784	404
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	746	994	13	481	1083	97	127	1063	981	9	825	425
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	746	994	13	481	1083	97	127	1063	981	9	825	425
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	746	994	13	481	1083	97	127	1063	981	9	825	425

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.91	0.92	0.90	0.90	0.95	0.91	0.85	0.95	0.91	0.85
Lanes:	2.00	3.95	0.05	2.00	3.67	0.33	1.00	4.00	1.00	1.00	3.00	1.00
Final Sat:	3502	6813	89	3532	6271	562	1605	6916	1615	1805	5187	1615

Capacity Analysis Module:

Vol/Sat:	0.21	0.15	0.15	0.14	0.17	0.17	0.07	0.15	0.61	0.00	0.16	0.26
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.20	0.24	0.24	0.20	0.24	0.24	0.13	0.36	0.56	0.09	0.33	0.52
Volume/Cap:	1.09	0.62	0.62	0.70	0.73	0.73	0.54	0.43	1.09	0.05	0.49	0.51
Delay/Veh:	104.6	37.0	37.0	43.1	39.2	39.2	45.7	25.7	81.5	43.8	28.9	17.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	104.6	37.0	37.0	43.1	39.2	39.2	45.7	25.7	81.5	43.8	28.9	17.0
DesignQueue:	37	46	1	24	51	5	7	42	30	0	34	13

City of La Quinta
Post 2020 General Plan Low Alternative
AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #6 Washington St./Eisenhower Dr.

Cycle (sec): 105 Critical Vol./Cap. (X): 0.418
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 42.2
Optimal Cycle: 105 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Split Phase	Split Phase
Rights:	Include	Ovl	Include	Include
Min. Green:	10 25 25	10 25 25	25 25 25	25 0 25
Lanes:	1 0 3 1 0	1 0 3 0 1	2 0 1 1 0	0 0 1 0 0

Volume Module:

Base Vol:	6	1393	16	47	1502	56	61	1	22	16	0	47
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	1393	16	47	1502	56	61	1	22	16	0	47
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	6	1466	17	49	1581	59	64	1	23	17	0	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	1466	17	49	1581	59	64	1	23	17	0	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	6	1466	17	49	1581	59	64	1	23	17	0	49

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.91	0.85	0.92	0.95	0.81	0.79	1.00	0.79
Lanes:	1.00	3.95	0.05	1.00	3.00	1.00	2.00	1.00	1.00	0.26	0.00	0.74
Final Sat:	1805	6823	79	1805	5187	1615	3502	1805	1534	386	0	1114

Capacity Analysis Module:

Vol/Sat:	0.00	0.21	0.21	0.03	0.30	0.04	0.02	0.00	0.01	0.04	0.00	0.04
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	1.10	0.29	0.29	0.12	0.31	0.55	0.24	0.24	0.24	0.24	0.00	0.24
Volume/Cap:	1.03	0.73	0.73	0.23	0.97	0.07	0.08	0.00	0.06	0.18	0.00	0.18
Delay/Veh:	43.2	34.9	34.9	42.6	51.2	10.9	31.1	30.5	31.0	32.1	0.0	32.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.2	34.9	34.9	42.6	51.2	10.9	31.1	30.5	31.0	32.1	0.0	32.1
DesignQueue:	0	64	1	3	68	2	3	0	1	1	0	2

City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #7 Washington St./Ave. 50

Cycle (sec): 90 Critical Vol./Cap. (X): 0.646
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 39.4
Optimal Cycle: 90 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Ovl	Include	Ovl
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 3 0 1	2 0 3 0 1	1 0 2 0 1	1 0 2 0 1

Volume Module:
Base Vol: 59 741 185 293 752 482 402 293 66 148 298 228
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 59 741 185 293 752 482 402 293 66 148 298 228
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 62 780 195 308 792 507 423 308 69 156 314 240
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 62 780 195 308 792 507 423 308 69 156 314 240
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol: 62 780 195 308 792 507 423 308 69 156 314 240

Saturation Flow Module:
Sat Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.91 0.85 0.92 0.91 0.85 0.95 0.95 0.85 0.95 0.95 0.85
Lanes: 1.00 3.00 1.00 2.00 3.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat: 1805 5187 1615 3502 5187 1615 1805 3610 1615 1805 3610 1615

Capacity Analysis Module:
Vol/Sat: 0.03 0.15 0.12 0.09 0.15 0.31 0.23 0.09 0.04 0.09 0.09 0.15
Crit Moves: ****
Green/Cycle: 0.11 0.28 0.28 0.11 0.28 0.48 0.20 0.34 0.34 0.14 0.28 0.39
Volume/Cap: 0.31 0.54 0.43 0.79 0.55 0.66 1.17 0.25 0.13 0.63 0.31 0.38
Delay/Veh: 37.7 28.0 27.4 49.5 28.2 20.0 138.8 21.5 20.5 42.0 25.9 20.1
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 37.7 28.0 27.4 49.5 28.2 20.0 138.8 21.5 20.5 42.0 25.9 20.1
DesignQueue: 3 29 7 14 30 14 18 10 2 7 12 8

City of La Quinta
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AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #8 Jefferson St./Country Club Dr.

Cycle (sec): 90 Critical Vol./Cap. (X): 0.612
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 36.3
Optimal Cycle: 90 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Ignore	Include	Include
Min. Green:	10 25 25	0 25 25	10 25 25	10 25 0
Lanes:	2 0 2 1 0	1 0 2 0 1	2 0 1 0 1	1 0 0 1 0

Volume Module:
Base Vol: 192 842 118 0 497 478 674 96 284 106 227 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 192 842 118 0 497 0 674 96 284 106 227 0
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.00 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 202 886 124 0 523 0 709 101 299 112 239 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 202 886 124 0 523 0 709 101 299 112 239 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol: 202 886 124 0 523 0 709 101 299 112 239 0

Saturation Flow Module:
Sat Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.92 0.89 0.89 1.00 0.95 1.00 0.92 1.00 0.85 0.95 1.00 1.00
Lanes: 2.00 2.63 0.37 1.00 2.00 1.00 2.00 1.00 1.00 1.00 1.00 0.00
Final Sat: 3802 4468 625 1900 3610 1900 3502 1900 1615 1805 1900 0

Capacity Analysis Module:
Vol/Sat: 0.06 0.20 0.20 0.00 0.14 0.00 0.20 0.05 0.19 0.06 0.13 0.00
Crit Moves: ****
Green/Cycle: 0.11 0.39 0.39 0.00 0.28 0.00 0.20 0.34 0.34 0.14 0.28 0.00
Volume/Cap: 0.52 0.51 0.51 0.00 0.52 0.00 1.01 0.16 0.54 0.45 0.45 0.00
Delay/Veh: 39.0 21.2 21.2 0.0 27.9 0.0 73.1 20.7 25.1 37.1 27.5 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 39.0 21.2 21.2 0.0 27.9 0.0 73.1 20.7 25.1 37.1 27.5 0.0
DesignQueue: 9 28 4 0 20 0 30 3 10 5 9 0

City of La Quinta
Post 2020 General Plan Low Alternative
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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #5 Jefferson St./Ave. 44

Cycle (sec): 82 Critical Vol./Cap. (X): 0.638
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 32.4
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	0 25 25	10 25 25	10 25 0
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 2 0 1	1 0 2 0 1

Volume Module:

Base Vol:	42 920 31	0 713 166	249 629 104	57 656 0
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	42 920 31	0 713 166	249 629 104	57 656 0
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	44 968 33	0 751 175	262 662 109	52 691 0
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	44 968 33	0 751 175	262 662 109	52 691 0
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	44 968 33	0 751 175	262 662 109	52 691 0

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.91 0.91	1.00 0.88 0.88	0.95 0.95 0.85	0.95 0.95 1.00
Lanes:	1.00 2.90 0.10	1.00 2.43 0.57	1.00 2.00 1.00	1.00 2.00 1.00
Final Sat:	1805 4991 170	1900 4089 953	1805 3610 1615	1805 3610 1900

Capacity Analysis Module:

Vol/Sat:	0.02 0.19 0.19	0.00 0.18 0.18	0.15 0.18 0.07	0.05 0.19 0.00
Crit Moves:	****	****	****	****
Green/Cycle:	0.12 0.43 0.43	0.00 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.00
Volume/Cap:	0.20 0.45 0.45	0.00 0.60 0.60	0.19 0.60 0.22	0.42 0.63 0.00
Delay/Veh:	32.8 16.9 16.9	0.0 24.9 24.9	157.6 25.2 21.5	34.6 25.7 0.0
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	32.8 16.9 16.9	0.0 24.9 24.9	157.6 25.2 21.5	34.6 25.7 0.0
DesignQueue:	2 27 1	0 25 6	11 22 4	4 23 0

City of La Quinta
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AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #10 Jefferson St./Miles Ave.

Cycle (sec): 82 Critical Vol./Cap. (X): 0.522
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 25.8
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Ignore
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 1 0 1	1 0 1 0 1

Volume Module:

Base Vol:	28 711 14	93 752 59	140 342 58	11 294 142
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 0.00
Initial Bse:	28 711 14	93 752 59	140 342 58	11 294 0
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 0.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.00
PHF Volume:	29 748 15	98 792 62	147 360 61	12 309 0
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	29 748 15	98 792 62	147 360 61	12 309 0
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 0.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 0.00
Final Vol:	29 748 15	98 792 62	147 360 61	12 309 0

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.91 0.91	0.95 0.90 0.90	0.95 1.00 0.85	0.95 1.00 1.00
Lanes:	1.00 2.94 0.06	1.00 2.78 0.22	1.00 1.00 1.00	1.00 1.00 1.00
Final Sat:	1805 5070 102	1805 4758 372	1805 1900 1615	1805 1900 1900

Capacity Analysis Module:

Vol/Sat:	0.02 0.15 0.15	0.05 0.17 0.17	0.08 0.19 0.04	0.01 0.16 0.00
Crit Moves:	****	****	****	****
Green/Cycle:	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.00
Volume/Cap:	0.13 0.48 0.48	0.45 0.55 0.55	0.67 0.62 0.12	0.05 0.53 0.00
Delay/Veh:	32.4 23.5 23.5	34.9 24.2 24.2	42.1 26.5 20.7	31.9 24.6 0.0
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	32.4 23.5 23.5	34.9 24.2 24.2	42.1 26.5 20.7	31.9 24.6 0.0
DesignQueue:	1 25 0	4 26 2	6 12 2	0 10 0

City of La Quinta
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AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #11 Jefferson St./Hwy. 111

Cycle (sec): 82 Critical Vol./Cap. (X): 0.667
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 28.0
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 3 0 1	2 0 3 0 1	2 0 3 0 1	2 0 3 0 1

Volume Module:

Base Vol:	30	442	299	200	513	115	125	1116	20	292	1227	135
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	30	442	299	200	513	115	125	1116	20	292	1227	135
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	32	465	315	211	540	121	132	1175	21	307	1292	142
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	465	315	211	540	121	132	1175	21	307	1292	142
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	32	465	315	211	540	121	132	1175	21	307	1292	142

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.85	0.92	0.91	0.85	0.92	0.91	0.85	0.92	0.91	0.85
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat:	3502	5187	1615	3502	5187	1615	3502	5187	1615	3502	5187	1615

Capacity Analysis Module:

Vol/Sat:	0.01	0.09	0.20	0.06	0.10	0.07	0.04	0.23	0.01	0.09	0.25	0.09
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30
Volume/Cap:	0.07	0.29	0.64	0.49	0.34	0.25	0.31	0.74	0.04	0.72	0.82	0.29
Delay/Veh:	32.0	21.9	27.4	34.5	22.2	21.7	33.3	27.6	20.1	40.5	29.8	22.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.0	21.9	27.4	34.5	22.2	21.7	33.3	27.6	20.1	40.5	29.8	22.0
DesignQueue:	1	15	10	9	18	4	5	39	1	13	44	5

City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #12 Jefferson St./Ave. 48

Cycle (sec): 82 Critical Vol./Cap. (X): 0.574
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 44.4
Optimal Cycle: 82 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Ovl	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 2 1 0	1 0 2 1 0	1 0 2 3 1	2 0 1 1 0

Volume Module:

Base Vol:	502	691	19	21	750	81	101	363	349	54	354	18
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	502	691	19	21	750	81	101	363	349	54	354	18
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	528	727	20	22	789	85	106	382	367	57	373	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	528	727	20	22	789	85	106	382	367	57	373	19
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	528	727	20	22	789	85	106	382	367	57	373	19

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.91	0.95	0.90	0.90	0.95	0.95	0.85	0.92	0.94	0.94
Lanes:	2.00	2.92	0.08	1.00	2.71	0.29	1.00	2.00	1.00	2.00	1.90	0.10
Final Sat:	1802	5926	138	1805	4612	497	1805	3610	1615	3502	3411	174

Capacity Analysis Module:

Vol/Sat:	0.15	0.14	0.14	0.01	0.17	0.17	0.06	0.11	0.23	0.02	0.11	0.11
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.43	0.12	0.30	0.30
Volume/Cap:	1.24	0.47	0.47	0.10	0.56	0.56	0.48	0.35	0.53	0.13	0.36	0.36
Delay/Veh:	161.1	23.4	23.4	32.2	24.4	24.4	35.2	22.3	18.2	32.3	22.4	22.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	161.1	23.4	23.4	32.2	24.4	24.4	35.2	22.3	18.2	32.3	22.4	22.4
DesignQueue:	22	24	1	1	26	3	4	12	10	2	12	1

City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #13 Jefferson St./Ave. 50

Cycle (sec): 97 Critical Vol./Cap. (X): 0.426
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 29.9
Optimal Cycle: 97 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Split Phase	Split Phase
Rights:	Include	Ovl	Include	Include
Min. Green:	10 25 25	10 25 25	25 25 25	25 25 25
Lanes:	2 0 3 0 1	2 0 3 0 1	1 1 1 0 1	1 1 1 0 1

Volume Module:

Base Vol:	36 419 16	217 370 418	382 307 28	17 292 271
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	36 419 16	217 370 418	382 307 28	17 292 271
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	38 441 17	228 389 440	402 323 29	18 307 285
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	38 441 17	228 389 440	402 323 29	18 307 285
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	38 441 17	228 389 440	402 323 29	18 307 285

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 0.91 0.85	0.92 0.91 0.85	0.90 0.95 0.85	0.90 0.95 0.85
Lanes:	2.00 3.00 1.00	2.00 3.00 1.00	1.70 1.30 1.00	1.00 2.00 1.00
Final Sat:	1502 5187 1615	1502 5187 1615	2917 2344 1615	1715 3610 1615

Capacity Analysis Module:

Vol/Sat:	0.01 0.09 0.01	0.07 0.07 0.27	0.14 0.14 0.02	0.01 0.09 0.18
Crit Moves:	0.01 0.09 0.01	0.07 0.07 0.27	0.14 0.14 0.02	0.01 0.09 0.18
Green/Cycle:	0.10 0.26 0.26	0.10 0.26 0.52	0.26 0.26 0.26	0.26 0.26 0.26
Volume/Cap:	0.11 0.33 0.04	0.63 0.29 0.53	0.53 0.53 0.07	0.04 0.33 0.68
Delay/Veh:	19.6 29.4 27.0	45.3 29.0 16.3	31.4 31.4 27.3	27.0 29.4 37.1
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	19.6 29.4 27.0	45.3 29.0 16.3	31.4 31.4 27.3	27.0 29.4 37.1
DesignQueue:	2 18 1	1 19 12	1 17 13	1 1 13 12

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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #15 Madison St. Ave. 50

Cycle (sec): 82 Critical Vol./Cap. (X): 0.612
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 34.5
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	12 527 54	233 527 37	30 445 9	49 486 163
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	12 527 54	233 527 37	30 445 9	49 486 163
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	13 555 57	245 555 39	32 468 9	52 512 172
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	13 555 57	245 555 39	32 468 9	52 512 172
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	13 555 57	245 555 39	32 468 9	52 512 172

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.94 0.94	0.95 0.94 0.94	0.95 0.95 0.95	0.95 0.91 0.91
Lanes:	1.00 1.81 0.19	1.00 1.87 0.13	1.00 1.96 0.04	1.00 1.50 0.50
Final Sat:	1805 3228 332	1805 3339 235	1805 3531 68	1805 2600 873

Capacity Analysis Module:

Vol/Sat:	0.01 0.17 0.17	0.14 0.17 0.17	0.02 0.13 0.13	0.03 0.20 0.20
Crit Moves:	0.01 0.17 0.17	0.14 0.17 0.17	0.02 0.13 0.13	0.03 0.20 0.20
Green/Cycle:	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30
Volume/Cap:	0.06 0.56 0.56	1.11 0.55 0.55	0.15 0.43 0.43	0.24 0.65 0.65
Delay/Veh:	12.0 24.6 24.6	130.3 24.3 24.3	32.5 23.1 23.1	33.1 26.1 26.1
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	12.0 24.6 24.6	130.3 24.3 24.3	32.5 23.1 23.1	33.1 26.1 26.1
DesignQueue:	1 18 2	2 10 18	1 1 15 0	2 17 6

City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #16 Madison St./Ave. 52

Cycle (sec): 82 Critical Vol./Cap. (X): 0.441
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 25.3
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	144	442	29	75	436	43	34	421	28	34	359	77
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	144	442	29	75	436	43	34	421	28	34	359	77
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	152	465	31	79	459	45	36	443	29	36	378	81
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	152	465	31	79	459	45	36	443	29	36	378	81
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	152	465	31	79	459	45	36	443	29	36	378	81

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.95	0.94	0.94	0.95	0.93	0.93
Lanes:	1.00	1.87	3.13	1.00	1.82	0.18	1.00	1.88	0.12	1.00	1.65	0.35
Final Sat:	1805	3354	224	1805	3245	318	1805	3358	220	1805	2896	620

Capacity Analysis Module:

Vol/Sat:	0.08	0.14	0.14	0.04	0.14	0.14	0.02	0.13	0.13	0.02	0.13	0.13
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30
Volume/Cap:	0.69	0.45	0.45	0.36	0.46	0.46	0.16	0.43	0.43	0.16	0.43	0.43
Delay/Veh:	43.5	23.3	23.3	34.1	23.4	23.4	32.6	23.1	23.1	32.6	23.1	23.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.5	23.3	23.3	34.1	23.4	23.4	32.6	23.1	23.1	32.6	23.1	23.1
DesignQueue:	6	15	1	3	15	1	1	15	1	1	12	3

City of La Quinta
Post 2020 General Plan Low Alternative
AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #17 Jackson St./Airport Blvd.

Cycle (sec): 82 Critical Vol./Cap. (X): 0.576
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 38.9
Optimal Cycle: 82 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	10	77	233	236	55	26	17	509	5	56	306	282
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	77	233	236	55	26	17	509	5	56	306	282
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	81	245	248	58	27	18	536	5	59	322	297
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	81	245	248	58	27	18	536	5	59	322	297
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	11	81	245	248	58	27	18	536	5	59	322	297

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.81	0.95	0.90	0.90	0.95	0.95	0.95	0.95	0.88	0.88
Lanes:	1.00	1.00	1.00	1.00	1.36	0.64	1.00	1.98	0.02	1.00	1.04	0.96
Final Sat:	1805	1805	1534	1805	2345	1092	1805	3573	33	1805	1743	1607

Capacity Analysis Module:

Vol/Sat:	0.01	0.04	0.16	0.14	0.02	0.02	0.01	0.15	0.15	0.03	0.18	0.18
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30
Volume/Cap:	0.05	0.15	0.52	1.13	0.08	0.08	0.08	0.49	0.49	0.27	0.61	0.61
Delay/Veh:	31.9	20.8	24.4	134.9	20.3	20.3	32.1	23.7	23.7	33.3	25.4	25.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.9	20.8	24.4	134.9	20.3	20.3	32.1	23.7	23.7	33.3	25.4	25.4
DesignQueue:	0	3	8	10	2	1	1	18	0	2	11	10

City of La Quinta
Post 2020 General Plan Low Alternative
AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #18 Harrison St./Airport Blvd.

Cycle (sec): 82 Critical Vol./Cap. (X): 0.568
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 33.1
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	33 1020 162	24 1021 203	215 549 49	96 284 7
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	33 1020 162	24 1021 203	215 549 49	96 284 7
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	33 1074 171	25 1075 214	226 578 52	101 299 7
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	33 1074 171	25 1075 214	226 578 52	101 299 7
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	33 1074 171	25 1075 214	226 578 52	101 299 7

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.89 0.89	0.95 0.89 0.89	0.95 0.94 0.94	0.95 0.95 0.95
Lanes:	1.00 2.59 0.41	1.00 2.50 0.50	1.00 1.83 0.17	1.00 1.95 0.05
Final Sat:	1805 4381 697	1805 4218 840	1805 3272 294	1805 3517 82

Capacity Analysis Module:

Vol/Sat:	0.02 0.25 0.25	0.01 0.25 0.25	0.13 0.18 0.18	0.06 0.09 0.09
Crit Moves:	****	****	****	****
Green/Cycle:	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30	0.12 0.30 0.30
Volume/Cap:	0.16 0.80 0.80	0.11 0.84 0.84	1.03 0.58 0.58	0.46 0.28 0.28
Delay/Veh:	32.6 29.4 29.4	32.3 30.7 30.7	103.8 24.8 24.8	35.0 21.8 21.8
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	32.6 29.4 29.4	32.3 30.7 30.7	103.8 24.8 24.8	35.0 21.8 21.8
DesignQueue:	1 36 6	1 36 7	9 19 2	4 10 0

City of La Quinta
Post 2020 General Plan Low Alternative
AM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #19 Grapefruit Blvd./Airport Blvd.

Cycle (sec): 85 Critical Vol./Cap. (X): 0.775
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 53.8
Optimal Cycle: 85 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 1 1 0	1 0 1 1 0	1 0 3 0 1	2 0 2 1 0

Volume Module:

Base Vol:	201 582 390	31 617 197	174 601 243	622 902 72
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	201 582 390	31 617 197	174 601 243	622 902 72
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	212 613 411	33 649 207	183 633 256	655 949 76
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	212 613 411	33 649 207	183 633 256	655 949 76
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	212 613 411	33 649 207	183 633 256	655 949 76

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 0.89 0.89	0.95 0.92 0.92	0.95 0.91 0.85	0.92 0.90 0.90
Lanes:	2.00 1.20 0.80	1.00 1.52 0.48	1.00 3.00 1.00	2.00 2.78 0.22
Final Sat:	3502 2031 1362	1805 2638 842	1805 5187 1615	3502 4750 380

Capacity Analysis Module:

Vol/Sat:	0.06 0.30 0.30	0.02 0.25 0.25	0.10 0.12 0.16	0.19 0.20 0.20
Crit Moves:	****	****	****	****
Green/Cycle:	0.12 0.29 0.29	0.12 0.29 0.29	0.13 0.29 0.29	0.15 0.32 0.32
Volume/Cap:	0.51 1.03 1.03	0.16 0.84 0.84	0.79 0.41 0.54	1.22 0.63 0.63
Delay/Veh:	36.3 65.3 65.3	34.0 34.2 34.2	53.0 24.3 26.4	152.3 25.4 25.4
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	36.3 65.3 65.3	34.0 34.2 34.2	53.0 24.3 26.4	152.3 25.4 25.4
DesignQueue:	9 22 15	1 23 7	8 22 9	27 32 3

City of La Quinta
Post 2020 General Plan Low Alternative
AM Peak Hour Conditions

Level of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #20 Grapefruit Blvd./Ave. 62

Cycle (sec): 85 Critical Vol./Cap. (X): 0.479
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 42.7
Optimal Cycle: 82 Level of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	1	1	0	1	1	0	1	1	0	1

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	162	445	57	58	204	30	57	66	87	283	70	147
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	162	445	57	58	204	30	57	66	87	283	70	147
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	171	468	71	61	215	32	60	69	92	298	74	155
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	171	468	71	61	215	32	60	69	92	298	74	155
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	171	468	71	61	215	32	60	69	92	298	74	155

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.81	0.95	0.95	0.81
Lanes:	1.00	1.74	0.26	1.00	1.74	0.26	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat:	1605	3072	466	1805	3083	459	1805	1805	1534	1805	1805	1534

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.09	0.15	0.15	0.03	0.07	0.07	0.03	0.04	0.06	0.17	0.04	0.10
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.12	0.29	0.29	0.12	0.29	0.29	0.13	0.29	0.29	0.15	0.32	0.32
Volume/Cap:	0.81	0.52	0.52	0.29	0.24	0.24	0.26	0.13	0.20	1.08	0.13	0.32
Delay/Veh:	56.3	25.4	25.4	35.0	22.9	22.9	34.1	22.1	22.7	112.9	20.6	22.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	56.3	25.4	25.4	35.0	22.9	22.9	34.1	22.1	22.7	112.9	20.6	22.2
DesignQueue:	7	16	2	3	7	1	2	2	3	12	2	5

City of La Quinta
Post 2020 General Plan Low Alternative
PM Peak Hour Conditions

Level of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #1 Washington St./Country Club Dr.

Cycle (sec): 120 Critical Vol./Cap. (X): 0.932
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 49.9
Optimal Cycle: 120 Level of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	3	1	0	4	0	1	2	0	1	1

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	143	1391	28	120	1558	952	1001	393	113	23	413	43
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	143	1391	28	120	1558	952	1001	393	113	23	413	43
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	151	1464	29	126	1640	1002	1054	414	119	24	435	45
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	151	1464	29	126	1640	1002	1054	414	119	24	435	45
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	151	1464	29	126	1640	1002	1054	414	119	24	435	45

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.91	0.85	0.92	0.92	0.92	0.95	0.94	0.94
Lanes:	1.00	3.92	0.08	1.00	4.00	1.00	2.00	1.55	0.45	1.00	1.81	0.19
Final Sat:	1305	6761	134	1805	6916	1615	3502	2711	779	1805	3226	334

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.08	0.22	0.22	0.07	0.24	0.62	0.30	0.15	0.15	0.01	0.13	0.13
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.08	0.31	0.31	0.08	0.31	0.61	0.30	0.36	0.36	0.14	0.21	0.21
Volume/Cap:	1.00	0.69	0.69	0.84	0.76	1.02	1.02	0.42	0.42	0.09	0.65	0.65
Delay/Veh:	129.4	37.1	37.1	86.0	38.7	57.3	75.4	29.3	29.3	44.7	45.5	45.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	129.4	37.1	37.1	86.0	38.7	57.3	75.4	29.3	29.3	44.7	45.5	45.5
DesignQueue:	9	71	1	8	80	30	53	18	5	1	24	2

Default Scenario	Mon Aug 28, 2000 15:50:13														Page 3-1	
City of La Quinta																
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Level Of Service Computation Report																
1997 HCM Operations Method (Base Volume Alternative)																

Intersection #2 Washington St./Hovley Ln.-42nd Ave.																

Cycle (sec):	120	Critical Vol./Cap. (X):										0.923				
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):										45.7				
Optimal Cycle:	120	Level Of Service:										D				

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	

Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	10	25	25		10	25	25		10	25	25		10	25	25	
Lanes:	1	0	2	1	0	1	0	2	1	0	1	0	1	0	1	0

Volume Module:																
Base Vol:	213	1108	75		106	1467	155		174	560	181		74	786	126	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	213	1108	75		106	1467	155		174	560	181		74	786	126	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95	
PHF Volume:	224	1377	79		112	1544	163		183	589	191		78	827	133	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	224	1377	79		112	1544	163		183	589	191		78	827	133	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol:	224	1377	79		112	1544	163		183	589	191		78	827	133	

Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.95	0.90	0.90		0.95	0.90	0.90		0.95	0.91	0.91		0.95	0.93	0.93	
Lanes:	1.00	2.84	0.16		1.00	2.71	0.29		1.00	1.51	0.49		1.00	1.72	0.28	
Final Sat:	1805	4866	279		1805	4626	488		1805	2625	851		1805	3045	490	

Capacity Analysis Module:																
Vol/Sat:	0.12	0.28	0.28		0.06	0.33	0.33		0.10	0.22	0.22		0.04	0.27	0.27	
Crit Moves:	****				****				****				****			
Green/Cycle:	0.13	0.41	0.41		0.08	0.36	0.36		0.11	0.32	0.32		0.08	0.29	0.29	
Volume/Cap:	0.92	0.69	0.69		0.74	0.92	0.92		0.92	0.70	0.70		0.52	0.92	0.92	
Delay/Veh:	58.8	29.8	29.8		71.9	45.0	45.0		95.7	37.7	37.7		55.9	54.2	54.2	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	58.8	29.8	29.8		71.9	45.0	45.0		95.7	37.7	37.7		55.9	54.2	54.2	
DesignQueue	11	59	3		7	71	8		11	28	9		5	42	7	

Default Scenario	Mon Aug 28, 2000 15:50:13													Page 4-1		
City of La Quinta																
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Level Of Service Computation Report																
1997 HCM Operations Method (Base Volume Alternative)																

Intersection #3 Washington St./Fred Waring Dr.																

Cycle (sec):	120	Critical Vol./Cap. (X):										0.904				
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):										45.3				
Optimal Cycle:	120	Level Of Service:										D				

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	

Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Ignore				Include			
Min. Green:	10	25	25		10	25	25		10	25	25		10	25	25	
Lanes:	2	0	2	1	0	1	0	3	0	1		1	0	2	1	0

Volume Module:																
Base Vol:	967	1479	47		43	1319	202		148	1123	968		56	1205	51	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
Initial Bse:	967	1479	47		43	1319	202		148	1123	0		56	1205	51	
User Adj:	0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.00		0.95	0.95	0.95	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
PHF Volume:	919	1405	45		41	1253	192		141	1067	0		53	1145	48	
Reduced Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	919	1405	45		41	1253	192		141	1067	0		53	1145	48	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
Final Vol:	919	1405	45		41	1253	192		141	1067	0		53	1145	48	

Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.92	0.91	0.91		0.95	0.91	0.85		0.95	0.91	1.00		0.95	0.90	0.90	
Lanes:	1.00	2.91	0.35		1.00	3.00	1.00		1.00	3.00	1.00		1.00	2.88	0.12	
Final Sat:	1802	5001	151		1805	5187	1615		1805	5187	1900		1805	4948	207	

Capacity Analysis Module:																
Vol/Sat:	0.26	0.28	0.28		0.02	0.24	0.12		0.08	0.21	0.00		0.03	0.23	0.23	
Crit Moves:	****				****				****				****			
Green/Cycle:	0.29	0.47	0.47		0.08	0.27	0.27		0.09	0.24	0.00		0.10	0.26	0.26	
Volume/Cap:	0.90	0.59	0.59		0.27	0.90	0.44		0.90	0.84	0.00		0.30	0.90	0.90	
Delay/Veh:	52.2	23.5	23.5		52.6	51.1	37.3		99.3	48.3	0.0		51.3	52.2	52.2	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	52.2	23.5	23.5		52.6	51.1	37.3		99.3	48.3	0.0		51.3	52.2	52.2	
DesignQueue:	46	53	2		3	65	10		9	57	0		3	60	3	

City of La Quinta
Post 2020 General Plan Low Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #4 Washington St./Miles Ave.

Cycle (sec): 120 Critical Vol./Cap. (X): 0.909
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 46.7
Optimal Cycle: 120 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	2	0	2	1	0	0	1	0	1	1	0	1

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	279	2219	59	299	2008	3	40	232	213	38	556	233
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	279	2219	59	299	2008	3	40	232	213	38	556	233
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	294	2336	62	315	2114	3	42	244	224	40	585	245
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	294	2336	62	315	2114	3	42	244	224	40	585	245
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	294	2336	62	315	2114	3	42	244	224	40	585	245

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.91	0.92	0.91	0.91	0.95	0.88	0.88	0.95	0.91	0.91
Lanes:	2.00	2.92	0.08	2.00	2.99	0.01	1.00	1.04	0.96	1.00	1.41	0.59
Final Sat:	3502	5033	134	3502	5180	7	1805	1747	1603	1805	2432	1019

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.08	0.46	0.46	0.09	0.41	0.41	0.02	0.14	0.14	0.02	0.24	0.24
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.10	0.48	0.48	0.09	0.47	0.47	0.08	0.24	0.24	0.09	0.25	0.25
Volume/Cap:	0.86	0.97	0.97	0.97	0.86	0.86	0.28	0.59	0.59	0.23	0.97	0.97
Delay/Veh:	73.3	43.1	43.1	96.9	31.7	31.7	52.6	41.9	41.9	51.0	69.0	69.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	73.3	43.1	43.1	96.9	31.7	31.7	52.6	41.9	41.9	51.0	69.0	69.0
DesignQueue:	18	92	2	19	82	0	3	13	12	2	31	13

City of La Quinta
Post 2020 General Plan Low Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #5 Washington St./Hwy. 111.

Cycle (sec): 88 Critical Vol./Cap. (X): 0.868
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 45.7
Optimal Cycle: 91 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	2	0	3	1	0	0	2	0	3	1	0	3

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	700	1674	10	557	1454	116	124	968	754	13	1108	571
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	700	1674	10	557	1454	116	124	968	754	13	1108	571
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	737	1762	11	586	1531	122	131	1019	794	14	1166	601
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	737	1762	11	586	1531	122	131	1019	794	14	1166	601
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	737	1762	11	586	1531	122	131	1019	794	14	1166	601

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	0.91	0.92	0.90	0.90	0.95	0.91	0.85	0.95	0.91	0.85
Lanes:	2.00	3.93	0.02	2.00	3.70	0.30	1.00	4.00	1.00	1.00	3.00	1.00
Final Sat:	3502	6866	43	3502	6335	505	1805	6916	1615	1805	5187	1615

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.21	0.26	0.26	0.17	0.24	0.24	0.07	0.15	0.49	0.01	0.22	0.37
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.18	0.28	0.28	0.18	0.28	0.28	0.11	0.28	0.47	0.11	0.28	0.47
Volume/Cap:	1.16	0.90	0.90	0.92	0.85	0.85	0.64	0.52	1.06	0.07	0.79	0.80
Delay/Veh:	123.7	36.7	36.7	54.1	33.5	33.5	43.9	26.7	71.8	35.0	32.1	26.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	123.7	36.7	36.7	54.1	33.5	33.5	43.9	26.7	71.8	35.0	32.1	26.0
DesignQueue:	31	66	0	24	57	5	6	37	23	1	43	17

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City of La Quinta
Post 2020 General Plan Low Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #6 Washington St./Eisenhower Dr.

Cycle (sec): 110 Critical Vol./Cap. (X): 0.514
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 47.0
Optimal Cycle: 110 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Split Phase	Split Phase
Rights:	Include	Ovl	Include	Include
Min. Green:	10 25 25	10 25 25	25 25 25	25 25 25
Lanes:	1 0 1 1 0	1 0 3 0 1	2 0 1 1 0	0 0 1 1 0 0

Volume Module:

Base Vol:	22 1861 24	52 1745 148	135 2 14	20 2 50
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	22 1861 24	52 1745 148	135 2 14	20 2 50
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	23 1959 25	55 1837 156	142 2 15	21 2 53
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	23 1959 25	55 1837 156	142 2 15	21 2 53
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	23 1959 25	55 1837 156	142 2 15	21 2 53

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.91 0.91	0.95 0.91 0.85	0.92 0.95 0.81	0.79 0.79 0.79
Lanes:	1.00 3.95 0.05	1.00 3.00 1.00	2.00 1.00 1.00	0.27 0.03 0.70
Final Sat:	1805 6815 87	1805 5187 1615	3502 1805 1534	417 40 1053

Capacity Analysis Module:

Vol/Sat:	0.01 0.29 0.29	0.03 0.35 0.10	0.04 0.00 0.01	0.05 0.05 0.05
Crit Moves:	****	****	****	****
Green/Cycle:	0.09 0.35 0.35	0.09 0.35 0.57	0.23 0.23 0.23	0.23 0.23 0.23
Volume/Cap:	0.14 0.83 0.83	0.34 1.03 0.17	0.18 0.00 0.04	0.22 0.22 0.22
Delay/Veh:	45.4 35.7 35.7	48.1 63.9 11.2	34.3 32.9 33.2	34.9 34.9 34.9
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	45.4 35.7 35.7	48.1 63.9 11.2	34.3 32.9 33.2	34.9 34.9 34.9
DesignQueue:	1 84 1	3 80 4	7 0 1	1 0 3

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City of La Quinta
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Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #7 Washington St./Ave. 50

Cycle (sec): 100 Critical Vol./Cap. (X): 0.855
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 51.1
Optimal Cycle: 100 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Ovl	Include	Ovl
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 3 0 1	2 0 3 0 1	1 0 2 0 1	1 0 2 0 1

Volume Module:

Base Vol:	89 940 191	323 911 521	595 376 86	225 405 354
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	89 940 191	323 911 521	595 376 86	225 405 354
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	94 989 201	340 959 548	626 396 91	237 426 373
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	94 989 201	340 959 548	626 396 91	237 426 373
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	94 989 201	340 959 548	626 396 91	237 426 373

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.91 0.85	0.92 0.91 0.85	0.95 0.95 0.85	0.95 0.95 0.85
Lanes:	1.00 3.00 1.00	2.00 3.00 1.00	1.00 2.00 1.00	1.00 2.00 1.00
Final Sat:	1805 5187 1615	3502 5187 1615	1805 3610 1615	1805 3610 1615

Capacity Analysis Module:

Vol/Sat:	0.05 0.19 0.12	0.10 0.18 0.34	0.35 0.11 0.06	0.13 0.12 0.23
Crit Moves:	****	****	****	****
Green/Cycle:	0.10 0.25 0.25	0.10 0.25 0.53	0.28 0.25 0.25	0.28 0.25 0.35
Volume/Cap:	0.52 0.76 0.50	0.97 0.74 0.64	1.24 0.44 0.23	0.47 0.47 0.66
Delay/Veh:	45.4 37.5 33.1	85.1 36.8 18.4	159.5 31.9 30.1	30.5 32.3 30.4
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	45.4 37.5 33.1	85.1 36.8 18.4	159.5 31.9 30.1	30.5 32.3 30.4
DesignQueue:	5 43 9	17 42 15	27 17 4	10 18 14

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City of La Quinta												
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1997 HCM Operations Method (Base Volume Alternative)												
Intersection #8 Jefferson St./Country Club Dr.												
Cycle (sec):	90	Critical Vol./Cap. (X):								0.846		
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):								49.1		
Optimal Cycle:	85	Level Of Service:								D		
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ignore			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	2	0	2	1	0	1	0	2	1	0	1	0
Volume Module:												
Base Vol:	352	1067	146	27	764	839	725	244	346	127	316	18
Growth Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	352	1067	146	27	764	0	725	244	346	127	316	18
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	371	1123	154	28	804	0	763	257	364	134	333	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	371	1123	154	28	804	0	763	257	364	134	333	19
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	371	1123	154	28	804	0	763	257	364	134	333	19
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.89	0.89	0.95	0.95	1.00	0.92	1.00	0.85	0.95	0.99	0.99
Lanes:	2.00	2.64	0.36	1.00	2.00	1.00	2.00	1.00	1.00	1.00	0.95	0.05
Final Sat:	3502	4479	614	1805	3610	1900	3502	1900	1615	1805	1783	102
Capacity Analysis Module:												
Vol/Sat:	0.11	0.25	0.25	0.02	0.22	0.00	0.22	0.14	0.23	0.07	0.19	0.19
Crit Moves:	****			****			****			****		
Green/Cycle:	0.11	0.28	0.28	0.11	0.28	0.00	0.20	0.34	0.34	0.14	0.28	0.28
Volume/Cap:	0.95	0.90	0.90	0.14	0.80	0.00	1.09	0.40	0.66	0.54	0.67	0.67
Delay/Veh:	73.4	39.7	39.7	36.4	34.9	0.0	96.9	23.0	28.2	38.7	32.3	32.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	73.4	39.7	39.7	36.4	34.9	0.0	96.9	23.0	28.2	38.7	32.3	32.3
DesignQueue:	17	43	6	1	31	0	32	9	13	6	13	

Default Scenario	Mon Aug 28, 2000 15:50:13										Page 10-1				
City of La Quinta															
Post 2020 General Plan Low Alternative															
PM Peak Hour Conditions															
Level Of Service Computation Report															
1997 HCM Operations Method (Base Volume Alternative)															
Intersection #9 Jefferson St./Ave. 44															
Cycle (sec):	99	Critical Vol./Cap. (X):								0.875					
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):								43.9					
Optimal Cycle:	99	Level Of Service:								D					
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected			Protected			Protected			Protected					
Rights:	Include			Include			Include			Include					
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25			
Lanes:	1	0	2	1	0	1	0	2	0	1	1	0	2	0	1
Volume Module:															
Base Vol:	76	1284	42	2	1056	227	268	775	138	93	1031	2			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	76	1284	42	2	1056	227	268	775	138	93	1031	2			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
PHF Volume:	80	1352	44	2	1112	239	282	816	145	98	1085	2			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0			
Reduced Vol:	80	1352	44	2	1112	239	282	816	145	98	1085	2			
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Final Vol:	80	1352	44	2	1112	239	282	816	145	98	1085	2			
Saturation Flow Module:															
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900			
Adjustment:	0.95	0.91	0.91	0.95	0.89	0.89	0.95	0.95	0.85	0.95	0.95	0.85			
Lanes:	1.00	2.91	0.09	1.00	2.47	0.53	1.00	2.00	1.00	1.00	2.00	1.00			
Final Sat:	1805	4998	163	1805	4154	893	1805	3610	1615	1805	3610	1615			
Capacity Analysis Module:															
Vol/Sat:	0.04	0.27	0.27	0.00	0.27	0.27	0.16	0.23	0.09	0.05	0.30	0.00			
Crit Moves:	****			****			****			****					
Green/Cycle:	0.10	0.29	0.29	0.10	0.29	0.29	0.17	0.35	0.35	0.14	0.32	0.32			
Volume/Cap:	0.44	0.94	0.94	0.01	0.93	0.93	0.93	0.65	0.26	0.39	0.93	0.00			
Delay/Veh:	43.5	46.5	46.5	40.1	45.4	45.4	74.8	28.2	23.2	39.7	45.6	22.7			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Del:	43.5	46.5	46.5	40.1	45.4	45.4	74.8	28.2	23.2	39.7	45.6	22.7			
Design Queue:	4	57	2	0	46	10	13	31	5	5	44				

Default Scenario Mon Aug 28, 2000 15:50:13 Page 11-1

City of La Quinta
Post 2020 General Plan Low Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #10 Jefferson St./Miles Ave.

Cycle (sec): 82 Critical Vol./Cap. (X): 0.847
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 38.9
Optimal Cycle: 82 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Ignore
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 1 0 1	1 0 1 0 1

Volume Module:

Base Vol:	226 1033	20 143 1044	100 217 372	66 56 414	151
Growth Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	0.00
Initial Bse:	226 1033	20 143 1044	100 217 372	66 56 414	0
User Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	0.00
PHF Adj:	0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.00
PHF Volume:	238 1087	21 151 1099	105 228 392	69 59 436	0
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0	0
Reduced Vol:	238 1087	21 151 1099	105 228 392	69 59 436	0
PCE Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	0.00
MLF Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	0.00
Final Vol:	238 1087	21 151 1099	105 228 392	69 59 436	0

Saturation Flow Module:

Sat/Lane:	1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.91	0.91 0.95 0.90	0.90 0.95 1.00	0.85 0.95 1.00
Lanes:	1.00 2.94	0.06 1.00 2.74	0.26 1.00 1.00	1.00 1.00 1.00
Final Sat:	1805 5073	98 1805 4673	446 1805 1900	1615 1805 1900

Capacity Analysis Module:

Vol/Sat:	0.13 0.21	0.21 0.08 0.24	0.24 0.13 0.21	0.04 0.03 0.23	0.00
Crit Moves:	****	****	****	****	****
Green/Cycle:	0.12 0.30	0.30 0.12 0.30	0.30 0.12 0.30	0.30 0.12 0.30	0.00
Volume/Cap:	1.08 0.70	0.70 0.69 0.77	1.04 0.68	0.14 0.27 0.75	0.00
Delay/Veh:	119.9 26.7	26.7 43.2 28.3	28.3 106.3 28.2	20.8 33.3 31.2	0.0
User DelAdj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
AdjDel/Veh:	119.9 26.7	26.7 43.2 28.3	28.3 106.3 28.2	20.8 33.3 31.2	0.0
DesignQueue:	10 36	1 6 37	4 9 13	2 2 15	0

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City of La Quinta
Post 2020 General Plan Low Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #11 Jefferson St./Hwy. 111

Cycle (sec): 82 Critical Vol./Cap. (X): 0.728
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 32.0
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 3 0 1	2 0 3 0 1	2 0 3 0 1	2 0 3 0 1

Volume Module:

Base Vol:	66 909	278 177 801	117 124 1407	49 326 1350	189
Growth Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
Initial Bse:	66 909	278 177 801	117 124 1407	49 326 1350	189
User Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
PHF Adj:	0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95
PHF Volume:	69 957	293 186 843	123 131 1481	52 343 1421	199
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0	0
Reduced Vol:	69 957	293 186 843	123 131 1481	52 343 1421	199
PCE Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
MLF Adj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
Final Vol:	69 957	293 186 843	123 131 1481	52 343 1421	199

Saturation Flow Module:

Sat/Lane:	1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 0.91	0.85 0.92 0.91	0.85 0.92 0.91	0.85 0.92 0.91
Lanes:	2.00 3.00	1.00 2.00 3.00	1.00 2.00 3.00	1.00 2.00 3.00
Final Sat:	3502 5187	1615 3502 5187	1615 3502 5187	1615 3502 5187

Capacity Analysis Module:

Vol/Sat:	0.02 0.18	0.18 0.05 0.16	0.08 0.04 0.29	0.03 0.10 0.27	0.12
Crit Moves:	****	****	****	****	****
Green/Cycle:	0.12 0.30	0.30 0.12 0.30	0.30 0.12 0.30	0.30 0.12 0.30	0.00
Volume/Cap:	0.16 0.61	0.60 0.44 0.53	0.25 0.31 0.94	0.11 0.80 0.90	0.40
Delay/Veh:	32.4 25.0	26.2 34.1 24.0	21.7 33.2 38.6	20.6 45.6 34.6	23.1
User DelAdj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
AdjDel/Veh:	32.4 25.0	26.2 34.1 24.0	21.7 33.2 38.6	20.6 45.6 34.6	23.1
DesignQueue:	3 32	0 8 28	4 5 50	2 14 48	6

Default Scenario	Mon Aug 28, 2000 15:50:13										Page 13-1				
City of La Quinta															
Post 2020 General Plan Low Alternative															
PM Peak Hour Conditions															

Level Of Service Computation Report															
1997 HCM Operations Method (Base Volume Alternative)															

Intersection #12 Jefferson St./Ave. 48															

Cycle (sec):	82	Critical Vol./Cap. (X):								0.804					
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):								32.2					
Optimal Cycle:	82	Level Of Service:								C					

Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			

Control:	Protected			Protected			Protected			Protected					
Rights:	Include			Include			Ovl			Include					
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25			
Lanes:	2	0	2	1	0	1	0	2	0	1	2	0	1	1	0

Volume Module:															
Base Vol:	398	1064	83	59	1053	116	162	558	464	35	708	74			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	398	1064	83	59	1053	116	162	558	464	35	708	74			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
PHF Volume:	419	1120	87	62	1108	122	171	587	488	37	745	78			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0			
Reduced Vol:	419	1120	87	62	1108	122	171	587	488	37	745	78			
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Final Vol.:	419	1120	87	62	1108	122	171	587	488	37	745	78			

Saturation Flow Module:															
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900			
Adjustment:	0.92	0.90	0.90	0.95	0.90	0.90	0.95	0.95	0.85	0.92	0.94	0.94			
Lanes:	2.00	2.78	0.22	1.00	2.70	0.30	1.00	2.00	1.00	2.00	1.81	0.19			
Final Sat:	3502	4760	370	1805	4602	507	1805	3610	1615	3502	3222	337			

Capacity Analysis Module:															
Vol/Sat:	0.12	0.24	0.24	0.03	0.24	0.24	0.09	0.16	0.30	0.01	0.23	0.23			
Crit Moves:	****			****			****			****					
Green/Cycle:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.43	0.12	0.30	0.30			
Volume/Cap:	0.98	0.77	0.77	0.28	0.79	0.79	0.78	0.53	0.71	0.09	0.76	0.76			
Delay/Veh:	74.4	28.3	28.3	33.4	28.9	28.9	50.8	24.2	22.7	32.0	28.9	28.9			
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
AdjDel/Veh:	74.4	28.3	28.3	33.4	28.9	28.9	50.8	24.2	22.7	32.0	28.9	28.9			
DesignQueue:	17	38	3	3	37	4	7	19	14	1	25				

Default Scenario		Mon Aug 28, 2000 15:50:13										Page 14-1					
City of La Quinta																	
Post 2020 General Plan Low Alternative																	
PM Peak Hour Conditions																	
Level Of Service Computation Report																	
1997 HCM Operations Method (Base Volume Alternative)																	
Intersection #13 Jefferson St./Ave. 50																	
Cycle (sec):		97		Critical Vol./Cap. (X):								0.571					
Loss Time (sec):		12 (Y+R= 4 sec)		Average Delay (sec/veh):								31.0					
Optimal Cycle:		97		Level Of Service:								C					
Approach:		North Bound				South Bound				East Bound				West Bound			
Movement:		L - T - R				L - T - R				L - T - R				L - T - R			
Control:		Protected				Protected				Split Phase				Split Phase			
Rights:		Include				Ovl				Include				Include			
Min. Green:		10 25 25				10 25 25				25 25 25				25 25 25			
Lanes:		2 0 3 0 1				2 0 3 0 1				1 1 1 0 1				1 1 1 0 1			
Volume Module:																	
Base Vol:		42 675 25				176 674 518				464 458 46				30 435 227			
Growth Adj:		1.00 1.00 1.00				1.00 1.00 1.00				1.00 1.00 1.00				1.00 1.00 1.00			
Initial Bse:		42 675 25				176 674 518				464 458 46				30 435 227			
User Adj:		1.00 1.00 1.00				1.00 1.00 1.00				1.00 1.00 1.00				1.00 1.00 1.00			
PHF Adj:		0.95 0.95 0.95				0.95 0.95 0.95				0.95 0.95 0.95				0.95 0.95 0.95			
PHF Volume:		44 711 26				185 709 545				488 482 48				32 458 239			
Reduct Vol:		0 0 0				0 0 0				0 0 0				0 0 0			
Reduced Vol:		44 711 26				185 709 545				488 482 48				32 458 239			
PCE Adj:		1.00 1.00 1.00				1.00 1.00 1.00				1.00 1.00 1.00				1.00 1.00 1.00			
MLF Adj:		1.00 1.00 1.00				1.00 1.00 1.00				1.00 1.00 1.00				1.00 1.00 1.00			
Final Vol:		44 711 26				185 709 545				488 482 48				32 458 239			
Saturation Flow Module:																	
Sat/Lane:		1900 1900 1900				1900 1900 1900				1900 1900 1900				1900 1900 1900			
Adjustment:		0.92 0.91 0.85				0.92 0.91 0.85				0.90 0.95 0.85				0.90 0.95 0.85			
Lanes:		2.00 3.00 1.00				2.00 3.00 1.00				1.55 1.45 1.00				1.00 2.00 1.00			
Final Sat:		3502 5187 1615				3502 5187 1615				2654 2621 1615				1715 3610 1615			
Capacity Analysis Module:																	
Vol/Sat:		0.01 0.14 0.02				0.05 0.14 0.34				0.18 0.18 0.03				0.02 0.13 0.15			
Crit Moves:		****				****				****				****			
Green/Cycle:		0.10 0.26 0.26				0.10 0.26 0.52				0.26 0.26 0.26				0.26 0.26 0.26			
Volume/Cap:		0.12 0.53 0.06				0.51 0.53 0.65				0.71 0.71 0.12				0.07 0.49 0.57			
Delay/Veh:		39.7 31.4 27.2				42.4 31.4 19.1				34.6 34.6 27.7				27.2 31.0 33.3			
User Del Adj:		1.00 1.00 1.00				1.00 1.00 1.00				1.00 1.00 1.00				1.00 1.00 1.00			
Adj Del/Veh:		39.7 31.4 27.2				42.4 31.4 19.1				34.6 34.6 27.7				27.2 31.0 33.3			
Design Level:		2 29 1				9 29 15				20 20 2				1 19 11			

Default Scenario	Mon Aug 28, 2000 15:50:13										Page 15-1			
City of La Quinta														
Post 2020 General Plan Low Alternative														
PM Peak Hour Conditions														

Level Of Service Computation Report														
1997 HCM Operations Method (Base Volume Alternative)														

Intersection #14 Jefferson St./Ave. 52														

Cycle (sec):	82	Critical Vol./Cap. (X):								0.572				
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):								45.0				
Optimal Cycle:	82	Level Of Service:								D				

Approach:	North Bound			South Bound			East Bound			West Bound				
Movement:	L	T	R	L	T	R	L	T	R	L	T	R		

Control:	Protected			Protected			Protected			Protected				
Rights:	Include			Include			Ovl			Include				
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25		
Lanes:	2	0	2	1	0	2	0	2	0	1	0	1	1	0

Volume Module:														
Base Vol:	484	388	21	343	408	9	8	415	474	22	463	351		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Initial Bse:	484	388	21	343	408	9	8	415	474	22	463	351		
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		
PHF Volume:	509	408	22	361	429	9	8	437	499	23	487	369		
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0		
Reduced Vol:	509	408	22	361	429	9	8	437	499	23	487	369		
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Final Vol:	509	408	22	361	429	9	8	437	499	23	487	369		

Saturation Flow Module:														
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Adjustment:	0.92	0.90	0.90	0.90	0.92	0.91	0.91	0.95	0.95	0.85	0.95	0.89		
Lanes:	2.00	2.85	0.15	2.00	2.94	0.06	1.00	2.00	1.00	1.00	1.14	0.86		
Final Sat:	3502	4882	263	3502	5065	106	1805	3610	1615	1805	1920	1455		

Capacity Analysis Module:														
Vol/Sat:	0.15	0.08	0.08	0.10	0.08	0.08	0.00	0.12	0.31	0.01	0.25	0.25		
Crit Moves:	****			****			****			****				
Green/Cycle:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.43	0.12	0.30	0.30		
Volume/Cap:	0.19	0.27	0.27	0.85	0.28	0.28	0.04	0.40	0.72	0.10	0.83	0.83		
Delay/Veh:	143.4	21.7	21.7	49.6	21.7	21.7	31.8	22.8	23.3	32.2	32.4	32.4		
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
AdjDel/Veh:	143.4	21.7	21.7	49.6	21.7	21.7	31.8	22.8	23.3	32.2	32.4	32.4		
DesignQueue	21	13	1	15	14	0	0	14	14	1	16	12		

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City of La Quinta												
Post 2020 General Plan Low Alternative												
PM Peak Hour Conditions												
Level Of Service Computation Report												
1997 HCM Operations Method (Base Volume Alternative)												
Intersection #15 Madison St. Ave. 50												
.....												
Cycle (sec):	85	Critical Vol./Cap. (X):									0.830	
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):									45.5	
Optimal Cycle:	85	Level Of Service:									D	
.....												
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0

Volume Module:												
Base Vol:	29	677	52	331	585	46	87	486	19	61	545	281
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	29	677	52	331	585	46	87	486	19	61	545	281
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	31	713	55	348	616	48	92	512	20	64	574	296
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	31	713	55	348	616	48	92	512	20	64	574	296
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	31	713	55	348	616	48	92	512	20	64	574	296

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.95	0.94	0.94	0.95	0.90	0.90
Lanes:	1.00	1.86	0.14	1.00	1.86	0.14	1.00	1.92	0.08	1.00	1.32	0.68
Final Sat.:	1805	3315	256	1805	3312	258	1805	3453	135	1805	2260	1166

Capacity Analysis Module:												
Vol/Sat:	0.02	0.22	0.22	0.19	0.19	0.19	0.05	0.15	0.15	0.04	0.25	0.25
Crit Moves:	***			***			***			***		
Green/Cycle:	0.13	0.29	0.29	0.15	0.32	0.32	0.12	0.29	0.29	0.12	0.29	0.29
Volume/Cap:	0.13	0.73	0.73	1.26	0.58	0.58	0.43	0.50	0.50	0.30	0.86	0.86
Delay/Veh:	33.2	29.6	29.6	179.1	25.0	25.0	36.3	25.3	25.3	35.1	36.2	36.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Ven:	33.2	29.6	29.6	179.1	25.0	25.0	36.3	25.3	25.3	35.1	36.2	36.2
DesignQueue:	1	25	2	15	21	2	4	18	1	3	20	1

City of La Quinta
Post 2020 General Plan Low Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #16 Madison St./Ave. 52

Cycle (sec): 82 Critical Vol./Cap. (X): 0.639
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 29.5
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	1	1	0	1	1	0	1	0	1	1

Volume Module:

Base Vol:	152	523	52	7	565	45	42	631	169	43	691	153
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	152	523	52	7	565	45	42	631	169	43	691	153
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	160	551	55	7	595	47	44	664	178	45	727	161
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	160	551	55	7	595	47	44	664	178	45	727	161
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	160	551	55	7	595	47	44	664	178	45	727	161

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.95	0.92	0.92	0.95	0.92	0.92
Lanes:	1.00	1.82	0.18	1.00	1.85	0.15	1.00	1.58	0.42	1.00	1.64	0.36
Final Sat:	1805	3236	323	1805	3309	261	1805	2756	739	1805	2876	637

Capacity Analysis Module:

Vol/Sat:	0.09	0.17	0.17	0.00	0.18	0.18	0.02	0.24	0.24	0.02	0.25	0.25
Crit Moves:	****			****			****			****		
Green/Cycle:	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30	0.12	0.30	0.30
Volume/Cap:	0.73	0.56	0.56	0.03	0.59	0.59	0.20	0.79	0.79	0.20	0.83	0.83
Delay/Veh:	46.2	24.5	24.5	31.8	25.0	25.0	32.8	30.2	30.2	32.9	32.0	32.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.2	24.5	24.5	31.8	25.0	25.0	32.8	30.2	30.2	32.9	32.0	32.0
DesignQueue:	7	18	2	0	20	2	2	22	6	2	25	5

City of La Quinta
Post 2020 General Plan Low Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #17 Jackson St./Airport Blvd.

Cycle (sec): 105 Critical Vol./Cap. (X): 0.743
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 55.0
Optimal Cycle: 105 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	1	1	0	1	1	0	1	0	1	1

Volume Module:

Base Vol:	14	166	82	449	188	57	50	388	11	189	508	422
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	14	166	82	449	188	57	50	388	11	189	508	422
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	15	175	86	473	198	60	53	408	12	199	535	444
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	175	86	473	198	60	53	408	12	199	535	444
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	15	175	86	473	198	60	53	408	12	199	535	444

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.95	0.92	0.92	0.95	0.95	0.95	0.95	0.89	0.89
Lanes:	1.00	1.54	0.66	1.00	1.53	0.47	1.00	1.94	0.06	1.00	1.09	0.91
Final Sat:	1805	2302	1131	1805	2673	810	1805	3493	103	1805	1839	1526

Capacity Analysis Module:

Vol/Sat:	0.01	0.08	0.08	0.26	0.07	0.07	0.03	0.12	0.12	0.11	0.29	0.29
Crit Moves:	****			****			****			****		
Green/Cycle:	0.14	0.24	0.24	0.26	0.36	0.36	0.10	0.24	0.24	0.15	0.29	0.29
Volume/Cap:	0.06	0.32	0.32	1.00	0.21	0.21	0.31	0.49	0.49	0.75	1.00	1.00
Delay/Veh:	39.0	33.2	33.2	80.5	23.5	23.5	45.3	35.0	35.0	53.8	66.3	66.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.0	33.2	33.2	80.5	23.5	23.5	45.3	35.0	35.0	53.8	66.3	66.3
DesignQueue:	1	8	4	22	8	2	3	19	1	10	24	20

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City of La Quinta
Post 2020 General Plan Low Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #18 Harrison St./Airport Blvd.

Cycle (sec): 99 Critical Vol./Cap. (X): 0.876
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 40.4
Optimal Cycle: 99 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 1 1 0	1 0 1 1 0

Volume Module:

Base Vol:	227 1100 99	8 1172 308	235 406 149	135 634 17
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	227 1100 99	8 1172 308	235 406 149	135 634 17
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	239 1158 104	8 1234 324	247 427 157	142 667 18
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	239 1158 104	8 1234 324	247 427 157	142 667 18
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	239 1158 104	8 1234 324	247 427 157	142 667 18

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.90 0.90	0.95 0.88 0.88	0.95 0.91 0.91	0.95 0.95 0.95
Lanes:	1.00 2.75 0.25	1.00 2.38 0.62	1.00 1.46 0.54	1.00 1.95 0.05
Final Sat:	1805 4702 422	1605 3981 1045	1805 2534 932	1805 3501 94

Capacity Analysis Module:

Vol/Sat:	0.13 0.25 0.25	0.00 0.31 0.31	0.14 0.17 0.17	0.08 0.19 0.19
Crit Moves:	****	****	****	****
Green/Cycle:	0.10 0.34 0.34	0.14 0.34 0.34	0.15 0.29 0.29	0.11 0.25 0.25
Volume/Cap:	0.92 0.72 0.72	0.03 0.92 0.92	0.92 0.59 0.59	0.69 0.75 0.75
Delay/Veh:	78.2 30.0 30.0	37.1 40.8 40.8	77.2 31.3 31.3	51.5 37.8 37.8
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	78.2 30.0 30.0	37.1 40.8 40.8	77.2 31.3 31.3	51.5 37.8 37.8
DesignQueue:	12 45 4	0 49 13	12 17 6	7 29 1

Default Scenario Mon Aug 28, 2000 15:50:13 Page 20-1

City of La Quinta
Post 2020 General Plan Low Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #19 Grapefruit Blvd./Airport Blvd.

Cycle (sec): 99 Critical Vol./Cap. (X): 0.876
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 52.6
Optimal Cycle: 99 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	10 25 25	10 25 25	10 25 25	10 25 25
Lanes:	2 0 1 1 0	1 0 1 1 0	1 0 3 0 1	2 0 2 1 0

Volume Module:

Base Vol:	276 683 554	69 642 248	269 988 247	478 793 49
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	276 683 554	69 642 248	269 988 247	478 793 49
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	291 719 625	73 676 261	283 1040 260	503 835 52
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	291 719 625	73 676 261	283 1040 260	503 835 52
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol:	291 719 625	73 676 261	283 1040 260	503 835 52

Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.92 0.88 0.88	0.95 0.91 0.91	0.95 0.91 0.85	0.92 0.90 0.90
Lanes:	2.00 1.07 0.93	1.00 1.44 0.56	1.00 3.00 1.00	2.00 2.82 0.18
Final Sat:	3502 1796 1561	1805 2495 963	1805 5187 1615	3502 4839 301

Capacity Analysis Module:

Vol/Sat:	0.08 0.40 0.40	0.04 0.27 0.27	0.16 0.20 0.16	0.14 0.17 0.17
Crit Moves:	****	****	****	****
Green/Cycle:	0.10 0.38 0.38	0.10 0.38 0.38	0.15 0.25 0.25	0.15 0.25 0.25
Volume/Cap:	0.82 1.06 1.06	0.40 0.72 0.72	1.06 0.79 0.64	0.97 0.68 0.68
Delay/Veh:	58.0 73.9 73.9	43.1 28.3 28.3	114.2 38.0 36.3	74.2 34.9 34.9
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	58.0 73.9 73.9	43.1 28.3 28.3	114.2 38.0 36.3	74.2 34.9 34.9
DesignQueue:	15 27 24	4 25 10	14 45 11	24 36 2

City of La Quinta
Post 2020 General Plan Low Alternative
PM Peak Hour Conditions

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #20 Grapefruit Blvd./Ave. 62

Cycle (sec): 95 Critical Vol./Cap. (X): 0.692
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 50.2
Optimal Cycle: 95 Level of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	25	25	10	25	25	10	25	25	10	25	25
Lanes:	1	0	1	1	0	1	1	0	1	0	1	1

Volume Module:

Base Vol:	133	287	94	159	464	59	46	82	158	453	116	110
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	133	287	94	159	464	59	46	82	158	453	116	110
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	140	302	99	167	488	62	48	86	166	477	122	116
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	140	302	99	167	488	62	48	86	166	477	122	116
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol:	140	302	99	167	488	62	48	86	166	477	122	116

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.93	0.93	0.95	0.95	0.81	0.95	0.88	0.88
Lanes:	1.00	1.51	0.49	1.00	1.77	0.23	1.00	1.00	1.00	1.00	1.03	0.97
Final Sat:	1805	2618	858	1805	3149	400	1805	1805	1534	1805	1715	1631

Capacity Analysis Module:

Vol/Sat:	0.08	0.12	0.12	0.09	0.15	0.15	0.03	0.05	0.11	0.26	0.07	0.07
Crit Moves:	****			****			****		****			
Green/Cycle:	0.11	0.26	0.26	0.11	0.26	0.26	0.14	0.26	0.26	0.24	0.36	0.36
Volume/Cap:	0.74	0.44	0.44	0.88	0.59	0.59	0.18	0.18	0.41	1.09	0.20	0.20
Delay/Veh:	55.3	29.5	29.5	76.0	31.5	31.5	36.1	27.1	29.4	106.1	21.0	21.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.3	29.5	29.5	76.0	31.5	31.5	36.1	27.1	29.4	106.1	21.0	21.0
DesignQueue:	7	12	4	8	20	3	2	3	7	20	4	4

APPENDIX G

Seismic, Geologic and Flooding Hazards Sections
of the Technical Background Report
for the Safety Element for the
City of La Quinta
La Quinta, California

Prepared by

Earth Consultants International
2522 N. Santiago Boulevard, Suite B
Orange, CA 92867
August 9, 2000



SEISMIC, GEOLOGIC AND FLOODING HAZARDS
SECTIONS OF THE TECHNICAL BACKGROUND REPORT
FOR THE SAFETY ELEMENT FOR THE

City of La Quinta

RIVERSIDE COUNTY, CALIFORNIA



August 9, 2000

Prepared for:
Terra Nova Planning & Research, Inc.
400 South Farrel, Suite B205
Palm Springs, California 92262

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TECHNICAL BACKGROUND REPORT GENERAL PLAN UPDATE - CITY OF LA QUINTA

CHAPTER 1: SEISMIC HAZARDS

While many natural and man-made hazards have the potential to impact the La Quinta general plan area, the event with the greatest potential for loss of life, property and economic damages in the City is an earthquake. This generalization is true for most cities in southern California and is due to the fact that earthquakes impact regions of significant areal extent, trigger many secondary effects such as landslides, fires and hazardous materials releases, and overwhelm the ability of local jurisdictions to respond.

The City of La Quinta and its sphere of influence are located between two of California's most active faults, the San Andreas and San Jacinto. At its closest point, the City is located within three miles of the San Andreas fault. The San Andreas is considered the boundary along which the Pacific Plate moves past the North American Plate at about 5 to 6 centimeters per year (Larson and others, 1968; Atwater, 1970).

Poorly consolidated sediments underlie portions of the City, especially in its northern and eastern portions. If ground water occurs within approximately 50 feet of the ground surface in these areas, liquefaction could occur during a moderate to strong earthquake. Ground water within the eastern portion of the City is currently within 50 feet of the surface. Furthermore, as a result of ground water recharge by the Coachella Valley Water District, seepage from the Coachella Canal, and increased landscape irrigation associated with the region's rapid development, ground-water levels are likely to rise in the future. This chapter characterizes the liquefaction susceptibility of the study area using available local data. Geotechnical standards and hazard reduction methods that can be implemented to mitigate the hazard of liquefaction are provided.

Earthquakes are a fact of life in southern California. Although it is not possible to prevent earthquakes from occurring, their destructive effects can be minimized. Comprehensive hazard mitigation programs that include the identification and mapping of hazards, prudent planning, emergency exercises, enforcement of building codes, and expedient retrofitting and rehabilitation of weak structures can reduce significantly the scope of an earthquake disaster. Since it is not possible to prevent an earthquake from occurring, local governments, emergency relief organizations, and residents are advised to take action and develop and implement policies and programs aimed at reducing the effects of earthquakes. Individuals should also exercise prudent planning to provide for themselves and their families in the aftermath of an earthquake.

Various geologic phenomena that can cause severe property damage and loss of life are triggered by earthquakes. These hazards include ground shaking, fault rupture, landslides, foundation failures caused by liquefaction or subsidence, tsunami and seiche. Many parts

of the City of La Quinta are susceptible to damage from many of these hazards. Earthquakes can also cause a variety of localized, but not less destructive hazards such as urban fires, dam failures, and toxic chemical releases.

Although casualties have been relatively low, recent earthquakes in or near urban environments have resulted in significant economic losses, such as the 1994 M 6.7 Northridge earthquake that resulted in \$20-\$30 billion in damage.

The three primary agents of damage in order of importance include:

1) **Ground Shaking Hazard:** Ground shaking is the earthquake effect that results in the vast majority of damage. Seismic waves propagating through the earth's crust are responsible for the ground vibrations normally felt during an earthquake. Seismic waves vibrate up and down and side to side at different frequencies, depending on the frequency content of the earthquake rupture mechanism, the distance from the earthquake source to a particular site, and the path and material through which the waves are propagating. As seismic waves travel through the earth's crust, their energy is lost due to the inelastic behavior of the ground motion, and due to scattering, diffraction and deflection of the waves as they cross materials of different physical properties. The overall effect, known as attenuation, alters the form and frequency content of the seismic waves with distance away from the earthquake's source.

2) **Liquefaction/Ground Failure:** Portions of the La Quinta general plan area are susceptible to liquefaction and landsliding or rockfall, both very destructive secondary effects of strong seismic shaking. Liquefaction occurs primarily in saturated, loose, fine to medium-grained soils in areas where the ground water table is 50 feet or less below the ground surface. When these sediments are shaken, such as during an earthquake, a sudden increase in pore water pressure causes the soils to lose strength and behave as a liquid. Excess water pressure is vented upward through fissures and soil cracks causing a water-soil slurry to bubble onto the ground surface. The resulting features are called sand boils, sand blows or "sand volcanoes." Liquefaction-related effects include loss of bearing strength, ground oscillations, lateral spreading, and flow failures or slumping. Several procedures have been developed to identify areas prone to ground failure. Although we know that loosely packed, unconsolidated, saturated deposits are most likely to liquefy, site-specific geotechnical studies are the only practical and reliable way of determining the liquefaction potential of a site.

3) **Primary Ground Rupture/Faulting:** Primary ground rupture along the causative fault typically results in a relatively small percentage of the total damage in an earthquake. However, it is difficult to mitigate primary ground rupture through design, therefore, the primary mitigative technique is to setback from the fault (i.e., establish structural avoidance zones). Faults throughout southern California have formed over millions of years as a response to various tectonic stress regimes. Some of these faults are generally

considered inactive under the present geologic conditions, that is, they are unlikely to generate any future earthquakes. Other faults are known to be accumulating strain as a result of current shifting of the earth's plates. Such faults have either generated earthquakes in historical times, or show geologic and geomorphic characteristics that suggest that they might move in the relatively recent future, within a time span of concern to the residents of the area, or for long-term consideration in building design.

1.1 Introduction

The City of La Quinta is located within a broad structural depression known as the Salton Trough. The Salton Trough region of southern California is considered the northward extension of the Gulf of California (Wilson, 1965; Larson and others, 1968; Atwater, 1970; Moore, 1973). Although tectonically similar to the Gulf of California, the trough is filled with as much as three miles of sediment derived from the surrounding mountains and the Colorado River (Fuis and others, 1984), as a result of several millimeters of tectonic subsidence per year. Tectonic activity continues at a high rate in the Salton Trough, as indicated by geodetic measurements, and historic as well as geomorphic evidence of recent fault movement. During the last $\pm 10,000$ years, the trough has been periodically inundated by bodies of water, the latest being the formation of the Salton Sea in 1905. At present, the trough is cut off from the Gulf of California by the accumulation of sediment at the mouth of the Colorado River.

The Imperial fault, located about 30 miles south of the City, appears to be the structure along which most plate boundary strain, developed at spreading centers in the Gulf of California, is transferred northward to the major fault branches of the San Andreas (Johnson, 1979). Therefore, activity to the south, such as on the Imperial fault, is considered the mechanism for building strain on the San Andreas. Although great earthquakes have occurred on the northern two-thirds of the San Andreas in 1857, 1906, and 1989, the southern section closest to the City of La Quinta has not broken historically (Allen, 1981). This section of the San Andreas, which is known as the Coachella Valley segment, extends from the Salton Sea to San Geronimo Pass. Very low levels of aseismic creep have been noted on this segment (Louie and others, 1985). Paleoseismic data near Indio indicate an average time interval between earthquakes of about 230 years (Sieh and others, 1996), however, the most recent rupture occurred about 300 years ago (1680 ± 40).

Faults in the Salton Trough trend predominantly to the northwest with right-lateral strike-slip displacement; however, faults of all types may be found in the trough. The northwesterly orientation and relative displacements reflect the pattern of motion of the Pacific and North American tectonic plates at the San Andreas fault. Movement between these two plates is responsible for the earthquakes that occur in the southern California region. Most (about 70%) of the movement between the Pacific and North American plates is accommodated by the San Andreas fault. The rest of the motion is distributed between the Eastern Mojave Shear Zone (a series of faults east of the San Andreas, responsible for the 1992 Landers and 1999 Hector Mine earthquakes), and several northwest-trending faults west of the San Andreas, including the San Jacinto, Whittier-Elsinore, Newport-Inglewood, Palos Verdes, and offshore faults (Working Group on California Earthquake Probabilities - WGCEP, 1995).

1.1.1 Earthquake Size and Impact

Earthquakes are normally classified as to severity according to their magnitude (a measure of the amount of energy released when a fault ruptures, as determined by measurements from seismograph records.), or their seismic intensity (a qualitative estimate of the damage caused by an earthquake at a given location). Because the amount of destruction generally decreases with increasing distance away from the epicenter (the point at the Earth's surface directly above where the earthquake originated), earthquakes are assigned a unique magnitude, however, they may be assigned several intensities.

The most commonly used seismic intensity scale, called the Modified Mercalli Intensity (MMI) scale, has 12 levels of damage. The higher the number, the greater the damage (Table 1.1). The intensity of seismic ground shaking at any given site is a function of several factors, but primarily the magnitude of the earthquake, the distance from the epicenter to the area of concern, the type of bedrock or soil materials between the epicenter and the site, and the topographic conditions of the site (whether it is located in a valley, or at the top of a hill or mountain). The amount of damage is also controlled to a certain extent by the size, shape, age, and engineering characteristics of the affected structures.

Several factors control how ground motion interacts with structures, making the hazard of ground shaking difficult to predict. In general, however, long-period seismic waves, characteristic of earthquakes that occur about 10 miles (15 kilometers) and farther from the area of concern, interact with and damage preferentially long-period structures such as high-rise buildings and bridges, or alluvial basins with long natural periods. Short-period seismic waves, characteristic of earthquakes that occur less than 10 miles from the area of concern, have the potential for damaging preferentially short-period structures, such as one- and two-story buildings.

1.1.2 Planning and Design Earthquakes

The largest earthquake likely to occur on a fault or fault segment is termed the maximum credible (MCE) or characteristic earthquake. Depending on the planned use lifetime, or importance of a facility, a maximum probable earthquake (MPE) is the earthquake most likely to occur in a specified period of time, (such as 30 to 100 years). The more critical the project, the longer the time period chosen and the larger the design earthquake.

TABLE 1.1 - ABRIDGED MODIFIED MERCALLI INTENSITY SCALE

Intensity Value and Description	Average peak Velocity (centimeters per second)	Average peak acceleration (g is gravity = 9.80 meters per second squared)
I. Not felt except by a very few under especially favorable circumstances (I Rossi-Forel scale)		
II. Felt only by a few persons at rest, especially on upper floors of high-rise buildings. Delicately suspended objects may swing. (I to II Rossi-Forel scale)		
III. Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing automobiles may rock slightly. Vibration like passing of truck. Duration estimated. (III Rossi-Forel scale)		
IV. During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls make creaking sound. Sensation like a heavy truck striking building. Standing automobiles rocked noticeably. (IV to V Rossi-Forel scale)	1-2	0.015g-0.02g
V. Felt by nearly everyone, many awakened. Some dishes, windows, and so on broken; cracked plaster in a few places; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop. (V to VI Rossi-Forel scale)	2-5	0.03g-0.04g
VI. Felt by all, many frightened and run outdoors. Some heavy furniture moved, a few instances of fallen plaster and damaged chimneys. Damage slight. (VI to VII Rossi-Forel scale)	5-8	0.06g-0.07g
VII. Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving cars. (VIII Rossi-Forel scale)	8-12	0.10g-0.15g
VIII. Damage slight in specially designed structures; considerable in ordinary substantial buildings with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, and walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving cars disturbed. (VIII+ to IX Rossi-Forel scale)	20-30	0.25g-0.30g
IX. Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken. (IX+ Rossi-Forel scale)	45-55	0.50g-0.55g
X. Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed, slopped over banks (X Rossi-Forel scale)	More than 60	More than 0.60g
XI. Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.		
XII. Damage total. Waves seen on ground surface. Lines of sight and level distorted. Objects thrown into air.		

Primary Source: Bolt (1993)

Geologists, seismologists, engineers and urban planners typically use maximum credible and maximum probable earthquakes to evaluate the seismic hazard of a region, the assumption being that if we plan for the worst-case scenario, smaller earthquakes that are more likely to occur can be dealt with more effectively. Seismic design parameter values (including peak ground acceleration (PGA), duration, and period of ground motion) are derived from maximum credible and probable earthquakes to establish safety margins.

1.1.3 Fault Activity

Although earthquakes occur often in southern California, many of the faults in the area have not moved and caused earthquakes in historic times, and fewer yet have caused a maximum credible earthquake in historic times. Therefore, the magnitude of the maximum credible and maximum probable earthquakes for a given fault are generally estimates calculated by seismologists based on the length of the fault, style of faulting, and other characteristics of the fault or the area. Data obtained from excavations across a fault (paleoseismic studies) provide additional insight as to how often the fault ruptures, and how much the fault moves in a single earthquake.

The State of California, under the guidelines of the Alquist-Priolo Earthquake Fault Zoning Act (Hart and Bryant, 1997), classifies faults according to the following criteria:

- **Active:** faults showing proven displacement within about the last 11,000 years (Holocene Epoch); and
- **Potentially Active:** faults showing evidence of movement within the last 1.6 million years.

A fault that has not moved in the last 11,000 years, as determined from direct geologic evidence, is presumed to be inactive for residential subdivisions. Although simple in theory, the evidence necessary to determine whether a fault has or has not moved during the last 11,000 years is sometimes difficult to obtain. The State definition of an active fault is designed to gauge the surface rupture potential of a fault, and is used to prevent development from being sited directly on the trace of an active fault. The underlying assumption is that if a fault has not moved in the last 11,000 years, it is not likely to move and be the source of a damaging earthquake in the future.

Potentially active faults are considered, relative to active faults, less likely to be the origin of an earthquake. In reality, however, most potentially active faults have been

insufficiently studied to determine whether they are active or not. In this study, both active and potentially active faults are addressed as potential earthquake sources.

The Alquist-Priolo Special Studies Zones Act was signed into law in 1972 (in 1994 it was renamed Alquist-Priolo Earthquake Fault Zoning Act). The primary purpose of the Act is to mitigate the hazard of fault rupture by prohibiting the location of structures for human occupancy across the trace of an active fault (Hart, 1994; Hart and Bryant, 1997). The Act requires the State Geologist (Chief of the Division of Mines and Geology) to delineate "Earthquake Fault Zones" along faults which are "sufficiently active" and "well-defined." These faults show evidence of Holocene surface displacement along one or more of their segments (sufficiently active) and are clearly detectable by a trained geologist as a physical feature at or just below the ground surface (well defined). The boundary of an "Earthquake Fault Zone" is generally about 500 feet from major active faults, and 200 to 300 feet from well-defined minor faults. The Act dictates that cities and counties withhold development permits for sites within an Earthquake Fault Zone within their jurisdiction until geologic investigations demonstrate that the sites are not threatened by surface displacements from future faulting (Hart and Bryant, 1997).

1.2 Earthquake Sources

The closest major fault system to La Quinta is the San Andreas fault, located less than 3 miles to the northeast of the City. Given the proximity of the San Andreas fault to the City, the most recent (1997) Uniform Building Code requires that most of the City incorporate near-source factors into the design of new buildings. As of July 1, 1999, the City of La Quinta, Building and Safety Department adopted the 1997 Uniform Building Code. In addition to the San Andreas, the San Jacinto fault zone is a likely source of earthquakes that may impact the City. Although several bedrock faults are mapped beneath and within the City of La Quinta, no evidence of active or potentially active faulting was found within the plan area, and no geologic evidence was found to support the inferred faulting illustrated by BRW, Inc. (1992) in the City's previous Safety Element. However, much of the plan area is located within 15 kilometers of the San Andreas fault, and a major ground rupturing earthquake on the San Andreas could result in smaller secondary displacements within the plan area. As a result, all proposed essential or critical facilities within the plan area should address the potential for ground rupture, and the seismic hazard mapping presented herein should be modified if new information is made available.

Table 1.2 - Potential Earthquake Sources for La Quinta

Fault Name	Distance from La Quinta	Type (per UBC)*	Slip Rate (mm/year)	Maximum Design Earthquake (Mmax)
San Andreas-Coachella Segment	3 miles	A	24	7.4
San Jacinto	10 miles	A	12	7.2
Elsinore	30 miles	B	4	6.8
Primary data source for this table: ICBO (1998)				
*: fault source type per 1997 Uniform Building Code				

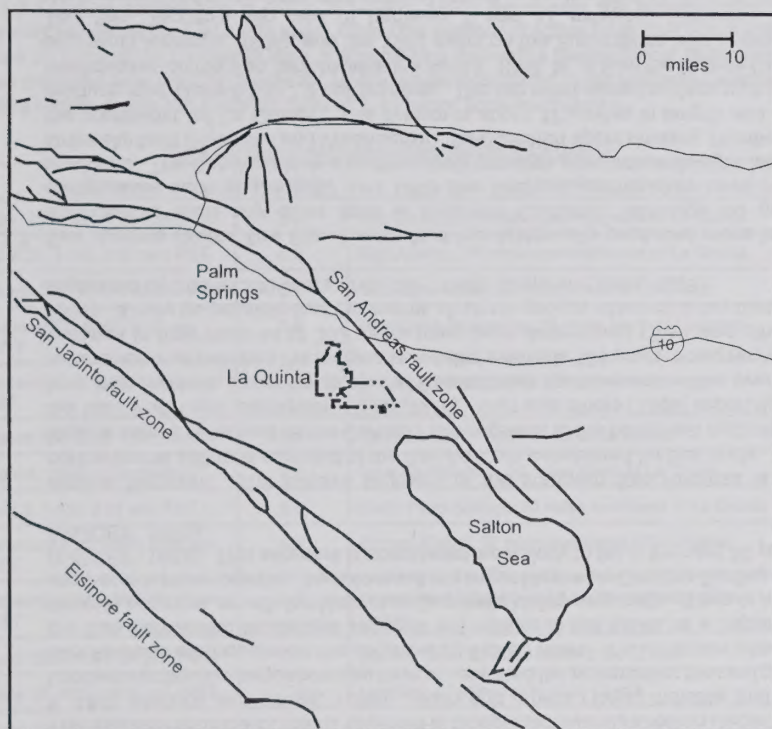


Figure 1-1: Regional Faulting/Earthquake Sources

1.2.1 San Andreas fault. The San Andreas fault passes within about 3 miles to the northeast of the City of La Quinta (Figure 1-1). The San Andreas is considered a "Master Fault", controlling the seismic hazard for southern California. The San Andreas is a right-lateral transform fault extending for more than 600 miles from the Salton Sea to Cape Mendocino. The San Andreas fault is perhaps the most studied in California (Wesnousky, 1986), and has been the primary laboratory for modern probabilistic seismic hazard analysis (Grant and Sieh, 1995). For this study the southern San Andreas is considered the segment including the "big bend" at the intersection with the Garlock fault southward to the Salton Sea. The southern San Andreas is subdivided into three segments as defined by the Working Group on California Earthquake Probabilities (WGCEP) (1995). From north to south they include the Mojave, San Bernardino Mountains and the Coachella Valley segments. The last major earthquake on the southern San Andreas fault was the 1857 M_w 8.0 Fort Tejon quake. The WGCEP (1995) data on each of these segments is presented below:

Segment	Length (miles)	Last Event	Probability of M_w 7.0 before 2024
Mojave	±83	1857	26%
San Bernardino Mtns.	±48	1812	28%
Coachella Valley	±71	1690	22%

Coachella Valley Segment: The data presented above indicates the southernmost segment, the Coachella Valley, is the least likely segment of the San Andreas fault to fail in the next 30 years (WGCEP, 1995). However, some researchers have suggested that the stress towards failure on the Coachella Valley segment, which is the closest segment to the City of La Quinta, was increased by the Landers earthquake sequence of 1992 (Stein and others, 1992), and Hector Mine sequence of 1999. The Coachella Valley segment extends from the Salton Sea on the southeast to San Geronio Pass on the northwest. Very low levels of aseismic creep have been noted on this segment (Louie and others, 1985). Paleoseismic data near Indio indicate an average time interval between earthquakes of about 230 years (Sieh and others, 1996), however, the most recent rupture occurred about 300 years ago (1690±40).

San Bernardino Mountains Segment: The WGCEP (1995) delineated this segment of the San Andreas as comprising the fault zone between the Coachella Valley segment to the southeast and the Mojave segment to the northwest. This segment is located about 30 miles northwest of La Quinta, and includes a near-vertical segment of the fault at the base of the San Bernardino Mountains, as well as a

complex segment of compressional and oblique faulting near San Geronio Pass. The San Bernardino Mountains segment is thought to have ruptured on December 8, 1812 (Jacoby and others, 1988). Stein and others (1992) indicate that the Landers earthquake sequence may have accelerated the potential for the next great San Andreas earthquake on this segment by 8 to 22 years. It is uncertain whether the San Bernardino Mountains segment will rupture in the future as a separate, discrete segment, or with the Mojave or Coachella Valley segments. If two or more segments rupture together, it would result in a larger Maximum Credible Earthquake (WGCEP, 1988). This segment is considered most likely to fail in the next 30 years (WGCEP, 1995).

Mojave Segment: The Mojave segment of the southern San Andreas is the northernmost ±63 mile segment of the San Andreas considered for this study. The Mojave segment, as well as the Carrizo Plain segment to the north, last ruptured in the 1857 Fort Tejon earthquake (Sieh, 1978). Sieh and others (1989) report dates from paleoseismic trenching studies at Pallett Creek for 12 events. The average recurrence time between the radiocarbon dated events is 131 years, however, wide variation in time from 44 to 332 years have been determined (Sieh and others, 1989). It may be possible that the events cluster in groups of two or three that are separated by 200 to 300 years (WGCEP, 1988; Grant and Sieh, 1995).

1.2.2 San Jacinto fault: The San Jacinto fault has historically produced more large earthquakes than any other fault in southern California, although no great earthquakes such as the 1857 and 1906 San Andreas earthquakes have been produced. The San Jacinto is a northwesterly trending, predominantly right-lateral strike-slip fault (Petersen and Wesnousky, 1994) located approximately 10 miles to the southwest of La Quinta. The system is about 175 miles in length and can produce magnitude 6.5 to 7.5 earthquakes. The two most-recent surface rupturing earthquakes on the San Jacinto were the April 9, 1968, M_w 6.5 on the Coyote Creek segment (Jennings, 1994), and the 1987 event on the Superstition Hills segment. The San Jacinto's slip rate of between 7 and 17 mm/year (Petersen and Wesnousky, 1994) classifies it as a "Type A" fault under the 1997 Uniform Building Code.

As in other large fault zones, many of the individual fault strands in the San Jacinto fault zone have their own identities. At its extreme northern end, where the San Jacinto meets the San Andreas fault, this fault zone is made up of several parallel fault strands.

1.2.3 Elsinore fault: The Elsinore fault zone is one of the largest in southern California, and in historical times, has been one of the quietest (Jennings, 1994). The fault is located within about 30 miles southwest of the City of La Quinta. The Elsinore fault is over 140 miles in length and has the potential to produce M_w 6.5 to 7.5 earthquakes (Jones, 1995; WGCEP, 1995). The fault has a slip rate of roughly 5.0 mm/year and breaks in a major ground rupturing earthquake on average about every 400 years (WGCEP, 1995). The southeastern extension of the Elsinore fault zone, the Laguna Salada fault, ruptured in 1892 in a magnitude 7 quake. The main trace of the Elsinore fault zone has ruptured only once in historical times, in 1910, when a magnitude 6 shock, which produced no known surface rupture and did little damage, occurred near Temescal Valley. Several of the fault strands which make up the Elsinore fault zone have their own names. From north to south, these include the Whittier, Glen Ivy, Temecula, Julian and Coyote Mountains segments. The Glen Ivy is subdivided into the Glen Ivy North and Glen Ivy South faults, and the Temecula segment consists of two parallel strands, the Wildomar fault (the more easterly), and the Willard fault.

1.3 Notable Historic Earthquakes in the La Quinta Region

Figure 1-2 and Table 1.3 illustrate the estimated epicenters and magnitudes of earthquakes that have resulted in significant ground shaking at La Quinta. These data are obtained from the Southern California Earthquake Center Data Center (SCEC-DC, 1999). The Modified Mercalli Intensity VI ground shaking observed in the area as a result of the M 7.3 Landers earthquake in 1992 (WGCEP, 1992) represents the highest historical intensity values for the La Quinta area. Given the number of active faults that occur within about 20 miles of the La Quinta area, it is surprising that only a few historical earthquakes have occurred near the City. Recently, MMI VI shaking occurred in the southern Coachella Valley region during the October 1999 M 7.1 Hector Mine earthquake.

Table 1.3: Historical Earthquakes Impacting La Quinta

Date	Magnitude	Location
Dec. 25, 1899; 4:25 a.m., PST	6.5	San Jacinto; 25 miles west-northwest of La Quinta
April 21, 1918; 2:32 pm, PST	6.8	San Jacinto; 28 miles west-northwest of La Quinta
March 25, 1937; 8:49 am, PST	6.0	Terwilliger Valley; 20 miles south of La Quinta
October 21, 1942; 9:30 am, PWT	6.6	Fish Creek Mountains, 35 miles south of La Quinta
December 4, 1948; 3:43 pm, PST	6.0	Desert Hot Springs, 20 miles north-northwest of La Quinta
March 19, 1954; 1:54 am, PST	6.4	San Jacinto; 27 miles south of La Quinta
April 8, 1968; 6:29 pm PST	6.5	Borrego Mountain; 30 miles south of La Quinta
July 8, 1986; 2:21 am, PDT	5.6	North Palm Springs; 22 miles northwest of La Quinta
November 23, 1987; 5:54 pm, PST	6.2	Elmore Ranch; 37 miles southeast of La Quinta
November 24, 1987; 6:16 am, PST	6.6	Superstition Hills; 39 miles south-southeast of La Quinta
April 22, 1992; 9:50 pm, PDT	6.1	Joshua Tree; 20 miles north of La Quinta
June 28, 1992; 4:57 am, PDT	7.3	Landers; 30 miles north of La Quinta
June 28, 1992; 8:05:30 am, PDT	6.4	Big Bear; 33 miles northwest of La Quinta
Oct. 16, 1999; 2:40 am, PDT	7.1	Hector Mine; 40 miles north

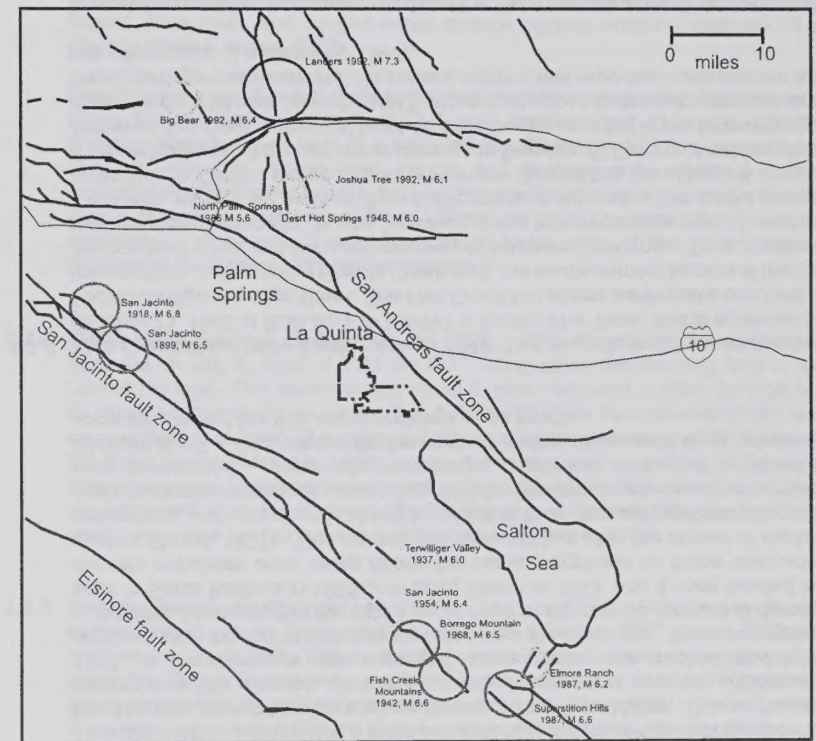


Figure 1-2: Major Historical Southern California Earthquakes

1.3.1 San Jacinto Earthquake of 1899: This earthquake occurred about 25 miles west-northwest of La Quinta, near the town of San Jacinto, California. The event occurred on December 25, 1899 at 4:25 am PST, with an estimated magnitude of 6.5. This earthquake occurred on the San Jacinto fault which historically has produced more large earthquakes than any other fault in southern California. The epicenter of this earthquake was not well located, but the damage pattern suggests the epicenter shown on Figure 1-2. This location is not far from the epicenter of the 1918 San Jacinto earthquake that was located primarily by intensity isoseismals that rely heavily on damage reports. This method of locating quakes is difficult to apply in sparsely populated areas (like southern California around the turn of the century), therefore, the locations of both epicenters are questionable. Regardless, the 1899 event was a devastating earthquake. Damage was greatest in the towns of San Jacinto and Hemet, where nearly all brick buildings were reported to be either badly damaged or destroyed. Also hard hit was the Soboba Indian Reservation, where six people were killed by falling adobe walls. Chimneys were thrown down and walls cracked in Riverside.

1.3.2 San Jacinto Earthquake of 1918: The magnitude 6.8 San Jacinto earthquake occurred on April 21, 1918 at 2:32 pm PST. This earthquake also occurred on the San Jacinto fault about 28 miles west-northwest of La Quinta. While the damage caused by the San Jacinto earthquake of 1918 was high, its timing was fortunate, and kept the number of fatalities and injuries low. Most of the damage caused by the quake occurred in the business districts of the towns of San Jacinto and Hemet, where large masonry structures collapsed in the shaking. Luckily, the earthquake struck on a Sunday afternoon, when the business districts were empty. Several people were injured and one death was reported. Two miners were trapped in a mine near Winchester, but were eventually rescued, uninjured. In another display of amazingly good fortune, two men in an automobile were swept off a road by a landslide, and would have rolled several hundred feet down a hillside had they not been stopped by a large tree.

The shaking cracked the ground, concrete roads, and concrete irrigating canals. None of the cracks were thought to represent surface rupture, although in one place, the alignment of a road was said to be off by about 7.5 centimeters (3 inches). Landslides, as mentioned above, were triggered, and the road from Hemet to Idyllwild was blocked in several places. Huge boulders rolled down nearby slopes. The flow rates of several springs in the area were altered, and it is claimed that the temperature of nearby hot springs changed. Sand craters were formed on one farm, and an area near Blackburn Ranch seemed to have "sunk" roughly one meter during the quake. The earthquake also caused minor damage outside the San Jacinto area, and was felt as far away as Taft (west of Bakersfield), Seligman (Arizona), and Baja California.

1.3.3 Terwilliger Valley Earthquake of 1937: This earthquake also occurred on the San Jacinto fault about 20 miles south of La Quinta. The event struck on March 25, 1937 at 8:49 am PST with a magnitude of 6.0. Although, originally called the Terwilliger Valley Earthquake, a more accurate recent determination of its epicenter has it located almost 19 miles east-southeast of Terwilliger Valley. This earthquake caused very little damage, since the epicentral region was sparsely populated in 1937. A few chimneys were damaged, some plaster was cracked, and a few windows were broken at structures located near the epicenter. It was recognized at the time, however, that the quake could have easily caused the kind of damage seen in Santa Barbara in 1925 or in Long Beach in 1933, had it been located in a densely populated area, being nearly the same magnitude as those destructive quakes (Wood, 1937). This earthquake occurred just after the advent of modern seismology, and was one of the first for which both an accurate epicentral location and a numerical magnitude value (using Charles Richter's newly developed system) were determined -- previously, earthquake "size" was measured by intensity. Intensity is still a valuable tool for the study of earthquakes, but it does not always accurately reflect the true energy-release of an event.

1.3.4 Fish Creek Mountains Earthquake of 1942: This magnitude 6.6 event struck on October 21, 1942 at 9:30 am PWT (PWT = Pacific War Time, and is equivalent to Pacific Daylight Savings Time). The Fish Creek Mountains earthquake occurred on the southern section of the Coyote Creek fault, the southernmost section of the San Jacinto fault zone, in a fairly remote area of southern California. Thus, it caused relatively little damage for its size. However, it was felt over a large area of southern California, as well as parts of Baja California and Arizona. The quake caused rockslides in Carrizo Gorge, blocking Highway 80 and the San Diego & Arizona Eastern Railroad. It caused minor damage in Brawley, El Centro, Westmoreland, and even San Diego, where at least 40 aftershocks were felt in the following eight days. Hardest hit was Jacumba Hot Springs, fairly close to the epicenter, but even there, damage was moderate. No surface rupture was reported in association with this earthquake (Louderback, 1943).

In recent years, it has been suggested that the Fish Creek Mountains quake actually occurred on a northeast-trending, left-lateral fault associated with the San Jacinto fault zone, rather than on the primary right-lateral fault. This would make it similar to the Elmore Ranch earthquake of 1987 on the Elmore Ranch fault, a left-lateral fault conjugate to the right-lateral Superstition Hills fault, the southeast extension of the San Jacinto fault zone.

1.3.5 Desert Hot Springs Earthquake of 1948: This magnitude 6.0 earthquake struck on December 4, 1948 at 3:43 pm PST. The fault involved is believed to be the South Branch of the San Andreas (or Banning fault, depending on nomenclature used). The Desert Hot Springs earthquake of 1948 not only was felt over a large area (as far away as central Arizona, parts of Mexico, Santa Catalina Island, and Bakersfield), but also caused notable damage in regions far from the epicenter. In the Los Angeles area, a 5,800-gallon water tank split open, water pipes were broken at UCLA and in Pasadena, and plaster cracked and fell from many buildings. In San Diego, a water main broke. In Escondido and Corona, walls were cracked. The administration building of Elsinore High School was permanently closed, due to the damage it sustained, as was a building at the Emory School in Palm City. Closer to the epicenter, landslides and ground cracks were reported, and a road leading to the Morongo Indian Reservation was badly damaged (Louderback, 1949). In Palm Springs, the city hit hardest by the quake, thousands of dollars of merchandise were thrown from shelves and destroyed. Part of a furniture store collapsed. Two people were injured when the shaking induced a crowd to flee a movie theater in panic. Numerous other instances of minor structural damage were reported. Fortunately, despite the damage brought on by this earthquake, no lives were lost.

1.3.6 San Jacinto Earthquake of 1954: This magnitude 6.4 earthquake struck on the San Jacinto fault about 27 miles south of La Quinta on March 19, 1954 at 1:54 am PST. Magistrale and others (1989) suggest that the Clark fault of the San Jacinto fault zone was involved. The 1954 San Jacinto fault earthquake, sometimes referred to as the Arroyo Salada earthquake, caused minor damage over a wide area of southern California, cracking plaster walls as far away as San Diego, and knocking plaster from the ceiling at the Los Angeles City Hall. In Palm Springs, a water pipe was broken, and the walls of several swimming pools were cracked. Part of San Bernadino experienced a temporary blackout when power lines snapped in the shaking. Indio and Coachella also experienced minor damage. The shock was felt as far away as Ventura County, Baja California, and Las Vegas (Louderback, 1954).

1.3.7 Borrego Mountain Earthquake of 1968: This earthquake resulted in about 18 miles of surface rupture along the Coyote Creek fault (a branch of the San Jacinto Fault Zone). Triggered slip was observed on fault systems up to 40 miles away. The magnitude 6.5 earthquake struck on April 8, 1968 at 6:29 pm PST about 30 miles south of La Quinta. When the Borrego Mountain earthquake struck in 1968, it was the largest and most damaging quake to have hit southern California since the Kern County earthquake, 16 years earlier. It was felt as far away as Las Vegas, Fresno, and even Yosemite Valley. The quake caused damage across most of southern California -- power lines were severed in San Diego County, plaster

cracked in Los Angeles, and the Queen Mary, in drydock at Long Beach, rocked back and forth on its keel blocks for 5 minutes. A few ceilings collapsed at various places in the Imperial Valley. Close to the epicenter, the quake caused landslides, hurling large boulders downslope, damaging campers' vehicles at Anza-Borrego Desert State Park, and caused minor surface rupture, cracking Highway 78 at Ocotillo Wells (Lander, 1968).

One surprising result of the event is that it apparently caused small displacements along the Superstition Hills fault (2.2 cm), Imperial fault (1.2 cm), and the Banning-Mission Creek fault (0.9 cm) -- 45 km, 70 km, and 50 km, respectively, from the epicenter. These fresh breaks and displacements were not noticed immediately after the mainshock, but no other significant events occurred within the interim that could have caused them. These are probably among the first noted instances of triggered slip, and they proved to be some of the most intriguing features of the Borrego Mountain earthquake.

1.3.8 North Palm Springs Earthquake of 1986: This magnitude 5.6 earthquake occurred on July 8, 1986 at 2:21 am PDT, along either the Banning fault or the Garnet Hill fault. The epicenter was about 6 miles northwest of Palm Springs and 22 miles northwest of La Quinta. The 1986 North Palm Springs earthquake was responsible for at least 29 injuries and the destruction or damage of 51 homes in the Palm Springs-Morongo Valley area. It also triggered landslides in the area. Damage caused by this quake was estimated at over \$4 million. Ground cracking was observed along the Banning, Mission Creek, and Garnet Hill faults, but these cracks were due to shaking, not surface rupture (Person, 1986).

1.3.9 Elmore Ranch Earthquake of 1987: The magnitude 6.2 Elmore Ranch earthquake struck on November 23, 1987 at 5:54 pm PST, about 37 miles southeast of La Quinta. This earthquake resulted in left-lateral strike-slip motion along the Elmore Ranch and associated faults, and appears to have triggered a larger earthquake the next morning on the right-lateral Superstition Hills fault, which is perpendicular to the Elmore Ranch system (Hudnut and others, 1989). A maximum surface offset of 12.5 centimeters was reported, and the faults where surface rupture was observed included the Elmore Ranch (main, west, and east branches), Lone Tree, and Kane Spring (main and east branches).

1.3.10 Superstition Hills Earthquake of 1987: This magnitude 6.6 earthquake occurred the morning following the Elmore Ranch event, about 39 miles south-southeast of La Quinta. This mainshock struck on November 24, 1987 at 6:16 am PST. A maximum surface offset of 50 centimeters was observed on the Superstition Hills

fault within 24 hours of the earthquake. However, during the next several months the offset was observed to have increased to about 1 meter, and triggered slip was observed on the Imperial, San Andreas, and Coyote Creek faults (Sharp and others, 1989).

1.3.11 Joshua Tree Earthquake of 1992: This magnitude 6.1 earthquake struck on April 22, 1992 at 9:50 pm PDT, approximately 20 miles north of the City of La Quinta. This event resulted from right-lateral strike-slip faulting and was preceded by a magnitude 4.6 foreshock. The Joshua Tree earthquake raised some alarms due to its proximity to the San Andreas fault. A San Andreas Hazard Level B was declared following this quake, meaning that the San Andreas fault was given a 5 to 25% chance of generating an even larger earthquake within 3 days. Roughly two months and 6,000 aftershocks later, the Landers earthquake broke the surface of the Mojave Desert in the largest quake to hit southern California in 40 years, showing that the concern caused by the Joshua Tree earthquake was at least partially warranted. The aftershocks of the Joshua Tree quake suggested that the fault that slipped in the shock is a north-northwest-trending, right-lateral strike-slip fault at least 15 km long (Jones and others, 1995). Based on these data, and the location of the shocks, researchers suggest that the Eureka Peak fault may have been the fault responsible for this earthquake.

Damage caused by the Joshua Tree earthquake was slight to moderate in the communities of Joshua Tree, Yucca Valley, Desert Hot Springs, Palm Springs, and Twentynine Palms. Thirty-two people had to be treated for minor injuries. Though somewhat forgotten in the wake of the Landers earthquake, the Joshua Tree quake was a significant event on its own, and was felt as far away as San Diego, Santa Barbara, Las Vegas, Nevada, and even Phoenix, Arizona (Person, 1992).

1.3.12 Landers Earthquake of 1992: On the morning of June 28, 1992, most people in southern California were awakened at 4:57 am PDT by the largest earthquake to strike California in 40 years. Named "Landers" after a small desert community near its epicenter, the earthquake had a magnitude of 7.3 and occurred about 30 miles north of the City of La Quinta. More than 50 miles of surface rupture associated with five or more faults occurred as a result of this earthquake. The average right-lateral strike-slip displacement was about 10 to 15 feet, while a maximum of up to 18 feet was observed. Centered in the Mojave Desert, approximately 120 miles from Los Angeles, the earthquake caused relatively little damage for its size (Brewer, 1992). It released about four times as much energy as the very destructive Loma Prieta earthquake of 1989, but fortunately, it did not claim as many lives (one child died when a chimney collapsed). The power of the earthquake was illustrated by the length of the ground rupture it left behind. The earthquake ruptured 5

separate faults: Johnson Valley, Landers, Homestead Valley, Emerson, and Camp Rock faults (Rymer, 1992). Nearby faults also experienced triggered slip and minor surface rupture.

1.3.13 Big Bear Earthquake of 1992: This magnitude 6.4 earthquake struck at little more than 3 hours after the Landers earthquake on June 28, 1992 at 8:05:30 am PDT. The epicenter was about 33 miles northwest of La Quinta. This earthquake is technically considered an aftershock of the Landers earthquake (indeed, the largest aftershock), although the Big Bear earthquake occurred over 20 miles west of the Landers rupture, on a fault with a different orientation and sense of slip than those involved in the main shock. From its aftershocks, the causative fault was determined to be a northeast-trending left-lateral fault. This orientation and slip are considered "conjugate" to the faults which slipped in the Landers rupture. The Big Bear earthquake did not break the ground surface, and, in fact, no surface trace of a fault with the proper orientation has been found in the area.

The Big Bear earthquake caused a substantial amount of damage in the Big Bear area, but fortunately, it claimed no lives. However, landslides triggered by the quake blocked roads in that mountainous area, aggravating the clean-up and rebuilding process (SCEC-DC, 1999).

1.3.14 1999 Hector Mine: Southern California's most recent large earthquake was a widely felt magnitude 7.1. It occurred on October 18, 1999, in a remote region of the Mojave Desert, 47 miles east-southeast of Barstow. Modified Mercalli Intensity VI (Table 1-1) shaking was reported in the southern Coachella Valley (SCEC-DC, 1999). The Hector Mine earthquake is not considered an aftershock of the M 7.3 Landers earthquake of 1992, although subsequent analysis will explore the relationship between these two events, which occurred on similar, north-northwest trending strike-slip faults within the Mojave Shear Zone. Hector Mine ruptured the Lavic Lake fault. Geologists documented a 40-km long surface rupture and a maximum right-lateral strike-slip offset of about 5 meters.

1.4 Design Earthquake Scenarios for La Quinta

There are two primary approaches to earthquake hazard design scenarios. The first approach involves using a specific design earthquake based on the rupture of a nearby fault, such as the San Andreas or San Jacinto faults which are relatively close to La Quinta. The second approach, termed probabilistic seismic hazard assessment, takes into account the recurrence rates of potential earthquakes on each fault in the area, and the potential ground motion that may result from each of these earthquakes.

1.4.1 Design Earthquakes: A *maximum probable earthquake (MPE)* is the largest earthquake a fault is predicted capable of generating within a specified time period of concern, say 30 or 100 years. Maximum probable earthquakes are most likely to occur within the time span of most development, and therefore, are commonly used in assessing seismic risk. The *maximum credible earthquake (MCE)*, i.e. the largest earthquake a fault is believed capable of generating, is nevertheless, often considered in a number of planning and engineering decisions. For example, maximum credible earthquakes are considered in the design of critical facilities such as dams, fire stations, and emergency operation centers. They are also used in urban and emergency planning to identify and mitigate the risk of worst-case scenarios.

As is true for most of southern California, many potential earthquake sources pose a threat to the City of La Quinta and its sphere of influence. For design purposes, a worst case scenario earthquake (maximum credible) for La Quinta may be a magnitude 8.0 should the entire southern San Andreas rupture in a single large earthquake. This event would involve simultaneous rupture of the Coachella Valley, San Bernardino Mountains and Mojave segments of the San Andreas. Although the probability for such an event is lower than for rupture of the individual segments (WGCEP, 1992), it does indeed represent a worst-case scenario event for the City of La Quinta and all other cities in the area. An estimate of several key ground shaking parameters expressed as a percentage of gravity in the City of La Quinta as a result of the MCE are given below:

Peak Ground Acceleration	At 0.3 seconds	At 1.0 seconds
42%	100%	66%

These design parameters for the MCE are utilized in the loss estimation presented in section 1.7 of this report. Damage in the City as a result of a major San Andreas earthquake would be extensive. Alluvial valley regions may liquefy and/or settle. Injuries and fatalities in the City are anticipated to be low because of the

predominantly modern building stock; however, economic losses resulting from damaged buildings and their contents will be extensive.

Probable earthquake events, that is earthquakes that are likely to occur during the design life of most buildings, include an earthquake generated by the San Jacinto fault, or earthquakes produced by rupture on the Coachella Valley segment of the San Andreas fault. This size of an event is estimated at magnitude 7.2 and is considered the Maximum Probable Event (MPE) for the City of La Quinta. Ground shaking parameters as a result of the MPE, expressed as a percentage of gravity, are given below:

Peak Ground Acceleration	At 0.3 seconds	At 1.0 seconds
26%	55%	34%

Section 1.7 of this report provides loss estimates for the MPE based on these ground shaking parameters. This event can be expected to damage vulnerable structures, such as potentially hazardous buildings, and result in localized ground failures in the City. Because of the City's mostly modern building stock, the threat to life-safety is relatively small (although not insignificant), but the economic losses estimated for the City are substantial.

1.4.2 Probabilistic Earthquake Hazard Assessment: This type of hazard assessment is utilized by the U.S. Geological Survey in producing national seismic hazard maps that are modified and adopted into the Uniform Building Code (UBC). The most recent mapping produced for the 1997 UBC includes data from the California Division of Mines and Geology (CDMG, 1996). Development of these maps requires three steps: 1) delineating earthquake sources; 2) defining the potential distribution of seismicity for each of these sources; and 3) calculating the potential ground motions from attenuation relations for all the model earthquakes.

The National Seismic Hazard Mapping Program, a joint effort between USGS and CDMG scientists, has produced maps indicating the following probabilistic ground shaking parameters for the City of La Quinta:

Type	10% PE in 50 yr	5% PE in 50 yr	2% PE in 50 yr
PGA	48.45*	61.17	76.00
0.2 sec SA	113.90	129.85	179.04
0.3 sec SA	110.28	128.32	176.36
1.0 sec SA	44.14	60.85	82.63
<i>explanation:</i> probabilistic ground motion values expressed as a percentage of gravity, PE=probability of exceedance, PGA=peak ground acceleration, SA=spectral acceleration. <i>*: example</i> = a peak ground acceleration of 48.45% of the force of gravity has a 10% chance of being exceeded in 50 years.			

These probabilistic ground motion values for the City of La Quinta are among the highest in southern California and are the result of the City's proximity to major fault systems with high earthquake recurrence rates.

1.5 Secondary Earthquake Effects

Geologic effects caused by earthquakes are divided into two principal categories: primary effects and secondary effects. Primary effects are those caused by deep-seated forces in the Earth and include fault rupture, tectonic uplift and subsidence. Secondary geologic effects are those caused by ground shaking and include liquefaction, compaction/settlement of sediment and various forms of mass movement (Youd, 1986), as well as seiches and tsunamis. While no known active or potentially active faults are known to transect the City of La Quinta or its sphere of influence, a significant portion of the general plan areas is underlain by thick sequences of alluvial soils that are susceptible to the secondary earthquake effects of liquefaction and settlement (Figure 1-3 and 1-4). In areas where ground failure might occur, seismic intensity values may increase by one or two levels. Areas of suspected ground failure in the event of a large magnitude, near-field earthquake, including liquefaction and rockfall, are discussed in this section.

1.5.1 Liquefaction: Liquefaction is a process by which clay-free soil deposits, primarily sands and silts, temporarily lose strength and behave as a viscous liquid rather than a solid. Seismic waves, primarily shear waves passing through a saturated granular layer, distort the granular structure and cause the loosely packed particles to collapse. Disruptions to the particulate structure generated by these collapses cause transfer of load from grain to grain contacts in the soil to the interstitial pore water. This transfer of load increases pressure in the pore water, causing drainage to occur. If drainage is restricted, a build up of pore-water pressure will result. As this pore-water pressure rises to a critical level, grain-to-grain contact stresses approach zero and the granular layer temporarily behaves as a liquid rather than a solid. At that point, liquefaction has occurred. In the liquefied condition, soil deformations may occur with little shear resistance (Youd, 1986).

Liquefaction does not occur at random, but is restricted to certain geologic and hydrologic environments, primarily recently deposited sands and silts, in areas with high groundwater levels. Currently, shallow ground water, within 50 feet of the ground surface, is present only in the eastern portion of the general plan area (Figure 1-3). Therefore, at present, this is the only area susceptible to liquefaction. However, prior to agricultural development of the region, groundwater levels were much higher in the area (Ikehara and others, 1997). It is likely that the entire Coachella Valley was once susceptible to liquefaction failure. This situation could occur again in the future if groundwater levels start to rise as a result of the increased use of imported water and groundwater recharge from the Colorado River.

City of La Quinta General Plan (exhibit map)

LEGEND

- Roads
- - - Township/Range Sections
- + + + Railroads
- City Limits
- - - General Plan Planning Area
- ... City Sphere of Influence

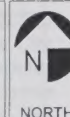
Figure 1-3:
Liquefaction Susceptibility

- L** Liquefaction hazard due to coexistence of young sediments and ground water that may be within 30 feet of the surface.
- PL** Potential liquefaction hazard due to the presence of young sediments, however, ground water is generally more than 30 feet below the surface.
- NL** Not liquefiable, regions underlain by granitic bedrock.

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Scale

0 6,260 12,660 18,760
Feet



Riverside County Vicinity Map



Map prepared on July 10, 2000
Map prepared by: Aerial Information Systems
Map Version No. 6

City of La Quinta General Plan (exhibit map)

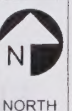
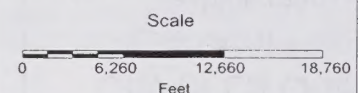
LEGEND

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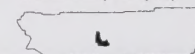
Figure 1-4:
Seismically Induced Settlement
and Rockfall Susceptibility

- SS** Region vulnerable to seismically induced settlement. Differential settlements are most likely to occur along valley margins.
- RF** Region vulnerable to seismically induced rockfall.

Prepared by: Earth Consultants International for
Terra Nova Planning & Research



Riverside County Vicinity Map



Map prepared on July 10, 2000
Map prepared by: Aerial Information Systems
Map Version No. 6

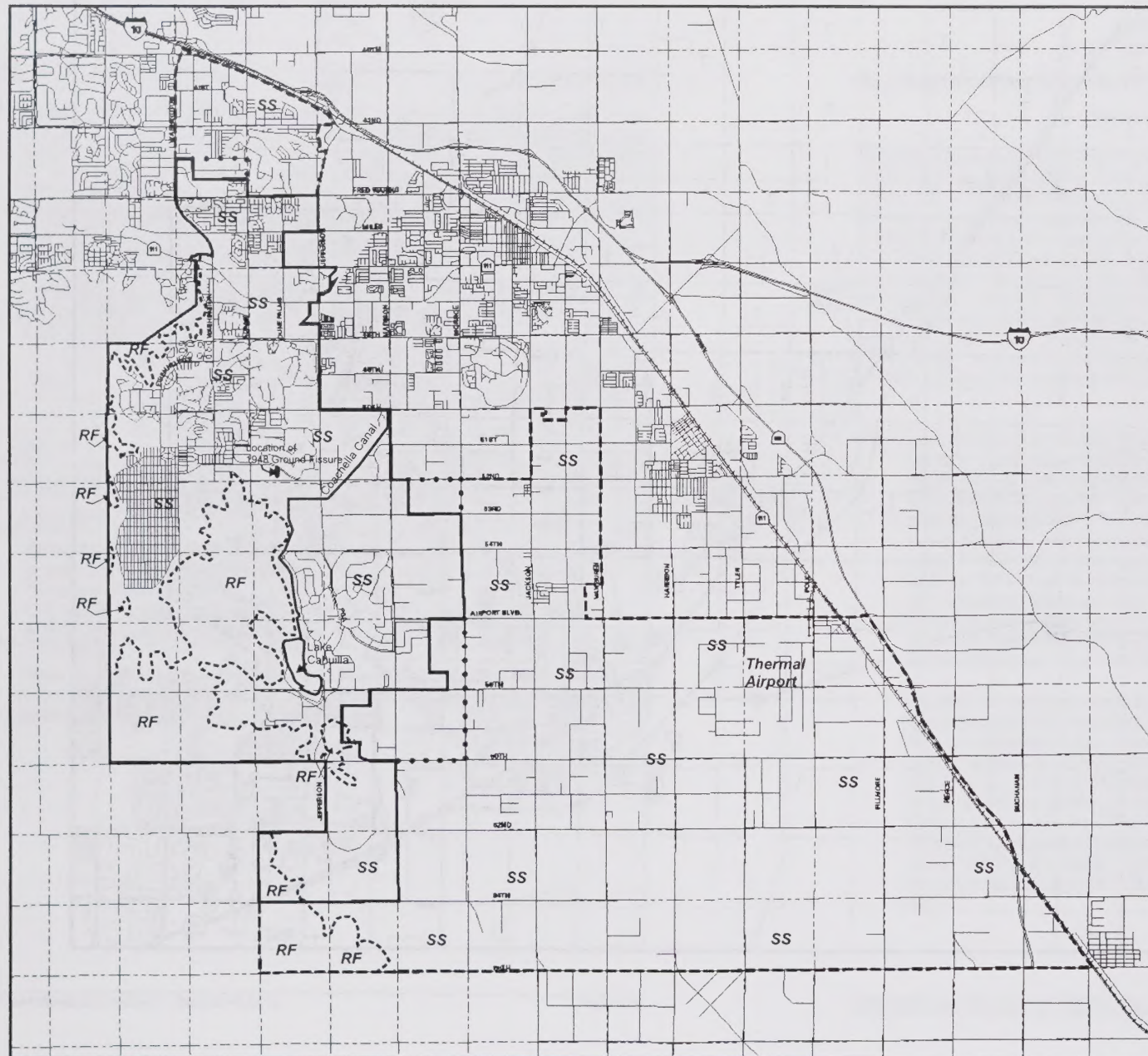


Figure 1-3 illustrates the eastern portion of the general plan area that is currently susceptible to liquefaction, while Figure 1-4 illustrates the more extensive region that may be vulnerable to seismically induced settlement. In addition, the approximate location of a large ground fissure observed in 1948 (Ikehara and others, 1997) is shown. This fissure was most likely the result of groundwater withdrawal, but it shows that sediments in the heart of the City are vulnerable to settlement. Strong earthquake shaking has been observed to cause settlement of alluvial soils deposited in valleys, such as the Coachella, fissures can develop along valley margins. This occurred during the 1994 Northridge earthquake in the Santa Clarita area. Strong shaking during the Northridge earthquake resulted in settlement of valley soils and the formation of fissures with several inches to one-foot of displacement along the margins of several valleys (Mori, 1994).

Given the potential for extensive damage as a result of liquefaction, this phenomenon has been studied extensively in the last few years. To complete an analysis on liquefaction, a correlation is required that relates earthquake magnitude with the distance from the epicenter to which liquefaction can occur. Such evaluations are a major element in earthquake hazard assessment and mitigation studies (Youd, 1986). In addition to the geologic and hydrologic conditions included in the above discussion, Modified Mercalli Intensities of VII and higher have been observed to be required for liquefaction to occur (Toppozada and others, 1988). There are many fault sources close to the La Quinta area (e.g. San Jacinto, Elsinore, and San Andreas fault systems) that may be capable of generating these levels of shaking in the City, with the consequent potential of inducing liquefaction in susceptible areas of the community.

As part of the Seismic Hazards Zonation Act of 1990, the CDMG is currently in the process of mapping some areas in the State that are susceptible to liquefaction during an earthquake. The Coachella Valley is not part of these studies. However, in response to and as part of this mapping effort, guidelines to evaluate the liquefaction susceptibility of an area have been developed (CDMG Special Publication 117 - Chapter 6, 1994; SCEC, 1999). These guidelines are as applicable to the Coachella Valley as elsewhere.

In response to the guidelines issued by the CDMG in Special Publication 117 (1994), several procedures have been developed to identify areas prone to ground failure (SCEC, 1999). These procedures generally require the following site-specific information: 1) the distribution of surficial and subsurface sediments that are youthful, cohesionless, and granular; 2) the location of shallow (50 feet or less) or perched ground water (water trapped in sediments at a higher elevation than that of the regional water table); and 3) anticipated earthquake peak ground accelerations having a 10% probability of being exceeded in 50 years. Recently deposited sediments, particularly river-channel and flood-plain deposits, have been

observed to be more susceptible to liquefaction than other deposits (Youd and Perkins, 1978). The distribution of particle sizes (i.e. whether the deposit consists of predominantly one grain size, or whether it is a heterogeneous mix of sand, silt and clay, for example) also influences the liquefaction susceptibility of the sediment. Sand and silty sand deposits are most likely to liquefy. Bouldery and cobbly deposits, and deposits with 15% or more clay are considerably less likely to liquefy (Tinsley and others, 1985), although cobbly sediments appear to have liquefied during the August 17, 1999 earthquake in Turkey (T. Rockwell, personal communication, 1999).

Site-specific geotechnical studies are the only practical and reliable way of determining the liquefaction potential of a site. There are several useful references available to manage liquefaction hazards, including those by the Southern California Earthquake Center (1999), Ishihara (1985), and Seed and others (1983).

Four general approaches apply to the mitigation of liquefaction hazards: 1) avoidance, 2) prevention, 3) engineered design, and 4) post-earthquake repairs. A prime way to limit the damage due to liquefaction is to avoid areas susceptible to liquefaction. This approach is not always possible because some facilities such as transportation routes (State Route 111), irrigation canals (Coachella Canal), pipelines, etc., commonly must cross susceptible areas. In some instances, the ground can be stabilized by engineering methods, such as compaction, dewatering or replacement of soil. In other cases, structures can be designed to resist liquefaction by attachment (with piles, caissons, or similar engineering solutions) to the soil strata below all liquefiable layers.

1.5.2 Earthquake-Induced Slope Instability: Large-scale landslides, as well as rockfalls, are relatively common secondary effects of major earthquakes. For example, an area of about 2 square miles slid in the 1964 Great Alaskan earthquake. In the 1989 Loma Prieta and 1994 Northridge earthquakes, smaller failures occurred in hillside areas similar to the terrain in portions of La Quinta. As a result of the Northridge and Landers earthquakes, many hillside and hilltop developments were damaged. Especially vulnerable were above-ground water tanks that failed catastrophically in the Northridge earthquake.

Very steep, potentially unstable slopes are located in the south-central portion and along the western margin of the City of La Quinta. In fact, elevations in the City range from 30 feet below sea-level to a peak 1,601 feet elevation in the south-central portion of the City. Although these steep granitic slopes, which comprise about 30 percent of the area of the City are predominantly undeveloped, the developments at and near the base of these hills are vulnerable to earthquake-induced rockfall. The granitic rocks that underlie the City's mountains are durable

and resistant to erosion and slope failures. As such, they have formed very steep slopes on which individual boulders are susceptible to falling, especially as a result of ground shaking. Figure 1-4 illustrates the margins of these slopes where earthquake-induced rockfall is considered a hazard. These areas require site-specific geotechnical studies to determine risk and mitigation measures. Chapter 2 concerning Geologic Hazards in the City of La Quinta addresses slope stability issues in greater detail.

1.5.3 Seiches and Tsunamis: The City's tanks, reservoirs, lakes and swimming pools are enclosed bodies of water that are subject to potentially damaging oscillations, or seiches. This hazard is dependent upon specific earthquake parameters (e.g. frequency of the seismic waves, distance and direction from the epicenter, etc.), as well as site-specific design of the enclosed bodies of water, and is thus difficult to evaluate. The degree of damage, such as to swimming pools, would likely be minor. However, site-specific design to reduce the hazard of seiches in tanks that may fail downslope, with the potential to impact housing downgradient, is warranted. Damage to water tanks in recent earthquakes, such as the 1992 Landers-Big Bear sequence and the 1994 Northridge, resulted from seiching. As a result, the AWWA Standards for Design of Steel Water Tanks (D-100) provide new criteria for seismic design (Lund, 1994).

The City is protected from tsunamis (that is, seismically induced sea waves) due to its inland location.

1.6 Vulnerability of the City of La Quinta to Earthquake Hazards

This section assesses the earthquake vulnerability of structures and facilities common in the City of La Quinta. This analysis is based on past earthquake performance of similar types of buildings in the U.S. Beyond the scope of this study are the effects of design earthquakes on particular structures within the City of La Quinta. However, utilizing a recent standardized methodology developed for the Federal Emergency Management Agency (FEMA), general estimates of losses are provided in section 1.7 of this report.

Although it is not possible to prevent earthquakes from occurring, their destructive effects can be minimized. Comprehensive hazard mitigation programs that include the identification and mapping of hazards, prudent planning and enforcement of building codes, and expedient retrofitting and rehabilitation of weak structures can reduce significantly the scope of an earthquake disaster.

With these goals in mind, the State Legislature passed Senate Bill 547 addressing the identification and seismic upgrade of Unreinforced Masonry (URM) buildings. In addition, the law encourages identification and mitigation of seismic hazards associated with other types of potentially hazardous buildings.

The City of La Quinta's building stock is predominantly modern, with almost 5,000 building permits issued since 1997 alone (City of La Quinta, Building Permit Statistics, 1999). In addition, the population of the City has almost quadrupled since the mid-1980's. The vast majority of these permits have been issued for single-family dwellings. This indicates that most development in the City incorporates modern seismic-resistant building codes, and is of the type that generally performs the best in earthquakes (single-family wood-frame). However, as a result of the Northridge earthquake, we have learned that while occupants are well-protected, economic losses associated with structural damage, loss of contents and expensive repairs can be exceedingly high, even in a modern urban environment. For example, the losses associated with the Northridge earthquake approached \$30 billion. Various geologic phenomena that can cause property damage and loss of life are triggered by earthquakes. These hazards include ground shaking, fault rupture, landslides, and foundation failures caused by liquefaction or subsidence. Earthquakes can also cause a variety of localized, but not less destructive hazards such as urban fires, dam failures, and toxic chemical releases. As experienced during the 1994 Northridge earthquake, many mobile homes shifted or fell off their foundations resulting in ruptured gas lines and subsequent fires. This type of hazard is intensified by the relatively high density of homes within mobile home parks.

1.6.1 Potentially Hazardous Buildings and Structures

Most of the loss of life and injuries that occur during an earthquake are related to the collapse of hazardous buildings and structures. FEMA (1985) defines a hazardous building as "any inadequately earthquake resistant building, located in a seismically active area, that presents a potential for life loss or serious injury when a damaging earthquake occurs." Building codes have generally been made more stringent following damaging earthquakes. However, structures in the City of La Quinta built prior to improved building codes have generally not been upgraded to current building code standards, and may, therefore, be potentially hazardous during an earthquake.

Damage to buildings is commonly classified as either structural or non-structural. Structural damage means the building's structural support has been impaired. Structural support includes any vertical and lateral force-resisting systems, such as the building frames, walls, and columns. Non-structural damage does not affect the integrity of the structural support system. Examples of non-structural damage include broken windows, collapsed or rotated chimneys, and fallen ceilings. During an earthquake, buildings get thrown from side to side, and up and down. Heavier buildings are subjected to higher forces than lightweight buildings, given the same acceleration. Damage occurs when structural members are overloaded, or differential movements between different parts of the structure strain the structural components.

Larger earthquakes and longer shaking durations tend to damage structures more. The level of damage resulting from a major earthquake can be predicted only in general terms, since no two buildings undergo the exact same motions during a seismic event. Past earthquakes have shown us, however, that some buildings are more likely to perform more poorly than others.

Unreinforced masonry buildings (URMs) (see Figure 1-5), based on observations from past earthquakes, are prone to failure due to inadequate anchorage of the masonry walls to the roof and floor diaphragms, due to the limited strength and ductility of the building materials, and sometimes due to poor construction workmanship. These buildings are generally old, some dating to even the 19th century in the City of La Quinta. Unless the buildings have been appropriately reinforced and strengthened, an earthquake may cause irreparable damage, and even collapse of some of these URMs, with a resultant threat to human life and property. Deterioration of the mortar (often of lime and sand with little or no cement, having very little shear strength), and of the wood framing as a result of weather exposure may also contribute to the weakening and poor performance of these structures during an earthquake.

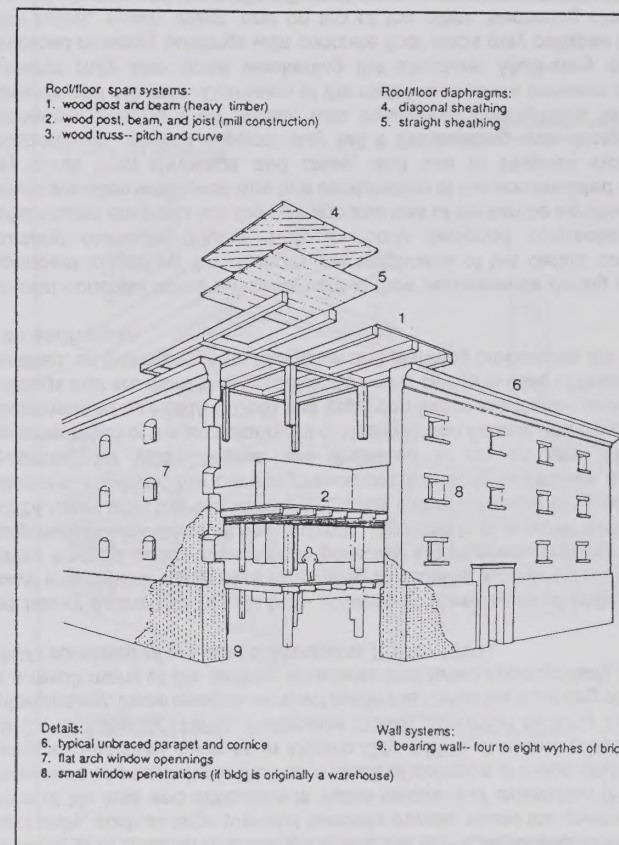


Figure 1-5: Unreinforced Masonry Building (URM). Prepared by the Applied Technology Council for the Federal Emergency Management Agency (1988), Rapid Visual Screening of Buildings for Potential Seismic Hazards: A Handbook: Earthquake Hazards Reduction Series 41, FEMA 154.

Parapets and cornices that are not positively anchored to the roofs may fall out. Wall diaphragms are generally made of wood. These diaphragms are therefore very flexible, allowing large out of plane deflections at the wall transverse. This large drift can cause the masonry walls to collapse. Some tall URM buildings have thin walls that may buckle out-of-plane under severe lateral loads. If the wall is a non-load bearing wall, it may fail; collapse of a load-bearing wall will result in partial or total collapse of the structure.

Although URMs have been assumed to be the most hazardous buildings in a community, the collapse of URM buildings during an earthquake, in general, does not pose as much a hazard to loss of life as the collapse of other types of structures. Several other more numerous building types are also known to perform poorly during moderate to strong earthquakes, although they have not been targeted for upgrading and strengthening. Of these, soft-story buildings (those with a story, generally the first floor, lacking adequate strength or toughness, due to few shear walls, i.e., buildings where the first floor is the garage) are of particular concern. The Northridge Meadows apartment collapse that killed 16 people during the January 17, 1994 Northridge earthquake was a building that included a mixture of residential units and parking garages on the first story (EERI, 1994).

The walls with large door openings common to garages have almost no resistance to lateral forces. If a second or more stories sit on top of the garage, the building may sustain significant amounts of damage, and even collapse during an earthquake. A soft-story building can also be one that has large window openings for display purposes on the first floor. Some soft-story buildings have a timber pole construction. The poles are often subject to wood deterioration with exposure to the elements. This deterioration, if unchecked, may also contribute to unsatisfactory seismic performance.

Structural damage to wood frame structures often results from a lack of, or inadequate connection, between the superstructure and the foundation. These buildings may slide off their foundations, with consequent damage to plumbing and electrical connections. Unreinforced masonry chimneys may also collapse. These types of damage are generally not life threatening, although they may be costly to repair. Wood frame buildings with stud walls generally perform well in an earthquake, unless they have no foundation or have a weak foundation constructed of unreinforced masonry or poorly reinforced concrete.

Damage to wood frame buildings is generally limited to cracking of the stucco, which in fact, dissipates much of the earthquake's induced energy. The collapse of wood frame structures, if it happens, generally does not generate heavy debris; but rather, the wood and plaster debris can be cut or broken into smaller pieces by hand-held equipment and removed by hand in order to reach victims (FEMA, 1985).

Partial or total collapse of buildings where the floors, walls and roofs fail as large intact units, such as large pre-cast concrete panels, cause the greatest concern in terms of life loss and difficulties in victim rescue and extrication (FEMA, 1985). Thousands of people have died as a result of collapse of these kinds of buildings during earthquakes, such as in Mexico City (1985), Armenia (1988), Nicaragua (1972), El Salvador (1986), Philippines (1990), and most recently Turkey (1999). Unfortunately, these lessons were not applied to California's parking structures, and as a result many of the parking structures that failed spectacularly in Northridge (1994) consisted of pre-cast components (EERI, 1994).

The heavy debris that results from collapse of these types of buildings requires heavy mechanical equipment to remove the rubble. Location and extrication of victims trapped under the rubble is generally a dangerous process that requires equipment to tunnel and lift heavy debris. Extrication of trapped victims within the first 24 hours after the earthquake becomes critical for victim survivability. In most instances, however, the planning resources available to procure the necessary equipment for victim rescue are ill-defined to non-existent. However, the implementation of the establishment of Heavy Urban Search and Rescue teams as recommended by FEMA (1985) has improved victim extrication and survivability. Buildings that are more likely to generate heavy debris in case of failure need to be identified, so that appropriate mitigation and planning procedures are defined prior to an earthquake.

Pre-cast concrete frame buildings vary in their performance during earthquakes, dependent in part on the strength and toughness of the details connecting the structural elements (Figure 1-6). If poorly designed connections between prefabricated elements fail, the damage and loss of life can be significant. Pre-cast frames are often weakened due to a combination of the accumulated stresses that may result from shrinkage and creep, and due to stresses incurred during transportation. Vertical support may fail if the building was designed with an inadequate bearing area and/or with insufficient connections between floor elements and columns. Corrosion of the metal connectors between prefabricated elements may also occur weakening the structure. Multi-story concrete and reinforced masonry buildings with concrete floor slabs may collapse with the floor slabs falling, nearly intact, one on top of the other, becoming closely stacked ("pancake" style of failure). The floor slabs prevent access to, and extrication of victims. Given the large size and weight of these slabs, some weighing up to 250 tons, the slabs generally need to be cut into smaller segments prior to removal by heavy cranes. The cutting of these slabs is a time-consuming process that requires breaking the concrete and cutting the reinforcing steel.

Tilt-up buildings have concrete wall panels, often cast on the ground, or fabricated off-site and trucked in, that are tilted upward into their final position. The weak

connections and anchors have been observed to pull out of the walls during an earthquake, causing the floors or roofs to collapse. A high rate of failure was observed for this type of construction in the 1971 Sylmar, California earthquake. Tilt up buildings may generate heavy debris if concrete wall panels fail.

Reinforced masonry buildings often perform well in moderate earthquakes if they are adequately reinforced and grouted, and if sufficient diaphragm anchorage exists. Poor construction workmanship, resulting in ungrouted and unreinforced walls may lead to failure of the building during a large earthquake. Insufficient reinforcement can also result in heavy damage to walls, while lack of positive connections of the floor and roof diaphragms can also result in structural damage.

Reinforced concrete frame buildings with or without reinforced infill walls display low ductility. Typical problems with this kind of building during an earthquake include shear failure if there are large tie spacings in columns, or if columns have insufficient shear strength, column failure if inadequate rebar splices are placed at the same location, shear failure of columns with insufficient tie anchorage, hinge deformation due to lack of continuous beam reinforcement, column failure due to inadequate reinforcing of beam-column joints, and non-structural damage due to the relatively low stiffness of the frame. A common type of failure observed following the M_w 6.7 January 17, 1994 Northridge earthquake was confined column collapse (EERI, 1994), where infilling between columns confined the length of the columns that were allowed to move laterally in the earthquake.

Multi-story steel buildings generally also have concrete floor slabs. However, these buildings are less likely to collapse than concrete structures. Common damage to these types of buildings is generally non-structural, including collapsed exterior curtain wall (cladding), and damage to interior partitions and equipment.

Older, pre-1945 steel frame structures may have unreinforced masonry such as bricks, clay tiles and terra cotta tiles as cladding or infilling. Cladding in newer buildings may be glass, infill panels or pre-cast panels that may fail and generate a band of debris around the building exterior (with considerable threat to pedestrians in the streets below). Structural damage may occur if the structural members are subject to plastic deformation which can cause permanent displacements. If some walls fail while others remain intact, torsion or soft-story problems may result. Pounding with adjacent buildings can also occur.

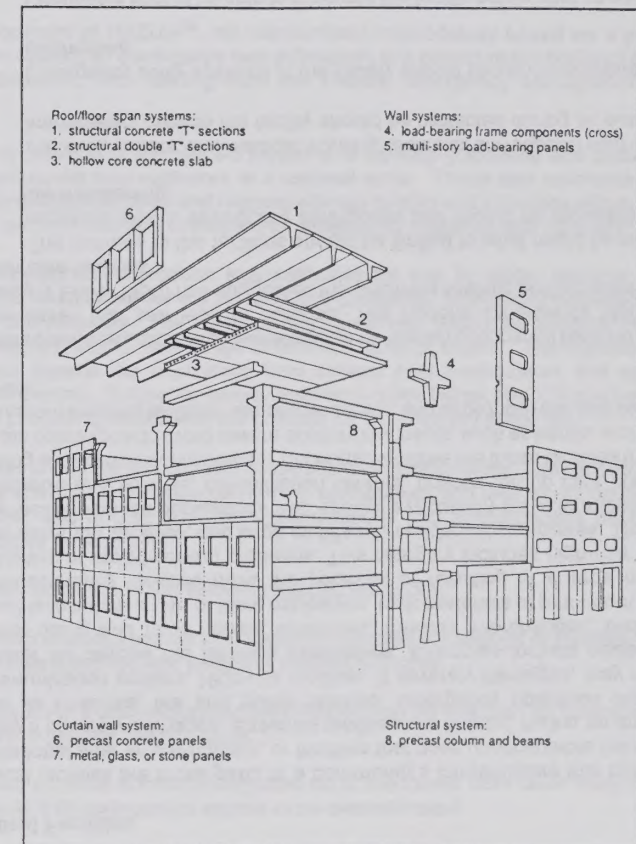


Figure 1-6: Precast concrete-frame construction. Prepared by the Applied Technology Council for the Federal Emergency Management Agency (1988), Rapid Visual Screening of Buildings for Potential Seismic Hazards: A Handbook: Earthquake Hazards Reduction Series 41, FEMA 154.

Buildings are often a combination of steel, concrete, reinforced masonry and wood, consisting of different structural systems on different floors or different sections of the building. Those types considered to be potentially hazardous (and that have not been discussed above) include: concrete frame buildings without special reinforcing, precast-concrete and precast-composite buildings, steel frame or concrete-frame buildings with unreinforced masonry walls, reinforced concrete wall buildings with no special detailing or reinforcement, large capacity buildings with long-span roof structures (such as theaters and auditoriums), large unengineered wood-frame buildings, buildings with inadequately anchored exterior cladding and glazing, and buildings with poorly anchored parapets and appendages (FEMA, 1985). Additional types of potentially hazardous buildings may be identified in the future as a result of observations of damaged structures after an earthquake.

The configuration of the building, that is, its vertical and/or horizontal shape can also be an important factor in earthquake performance. Simple, regular and symmetric buildings in general perform better than non-symmetric buildings. Non-symmetric buildings tend to twist in addition to shake laterally, while wings on a building tend to act independently during an earthquake, resulting in differential movements, and cracking. The geometry of the lateral load-resisting systems is another component of a building's configuration (for example buildings with one or two walls made mostly of glass, while the remaining walls are made of concrete or brick). Asymmetry in the placement of bracing systems that provide a building with earthquake resistance can result in twisting or differential motions, with resultant damage.

Site-related seismic hazards may include the potential for neighboring buildings to "pound" the structure, or for the neighboring buildings to collapse onto the adjacent building. Pounding occurs when there is little clearance between adjacent buildings, and the buildings "pound" against each other as they deflect during an earthquake. The effects of pounding can be especially damaging if the floors of the buildings impacting each other are at different elevations, so that, for example, the floor of one building hits a supporting column of the adjacent building. Damage to the column can result in partial or total collapse of the impacted building.

Permit data indicate that between two to three hundred mobile homes are located in the City of La Quinta. Mobile homes are prefabricated housing units that are trucked to the site and then placed on isolated piers, jackstands, or masonry block foundations (usually without any positive anchorage). Floors and roofs of mobile homes usually are constructed with plywood and outside surfaces are covered with sheet metal. Mobile homes typically do not perform well in earthquakes. Several were observed to perform poorly in the 1994 Northridge earthquake. Severe damage to mobile homes occurs when they fall off their supports, usually severing utility lines, with steep jackstands penetrating through the floor.

1.6.2 Critical Facilities

Critical facilities are those parts of a community's infrastructure that must remain operational after an earthquake, or facilities that pose unacceptable risks to public safety if severely damaged. Essential facilities are needed during an emergency, such as hospitals, fire and police stations, emergency operation centers and communication centers. High-risk facilities, if severely damaged, may result in a disaster far beyond the facilities themselves. Examples include nuclear power plants, dams and flood control structures, freeway interchanges, bridges, and industrial plants that use or store explosives, toxic materials or petroleum products. High-occupancy facilities have the potential of resulting in a large number of casualties or crowd-control problems. This category includes high-rise buildings, large assembly facilities, and large multifamily residential complexes. Dependent-care facilities house populations with special evacuation considerations, such as preschools and schools, rehabilitation centers, prisons, group care homes, and nursing and convalescent homes. Economic facilities are those facilities that should remain operational to avoid severe economic impacts, such as banks, archiving and vital record keeping facilities, airports and ports, and large industrial and commercial centers.

It is essential that critical facilities designed for human occupancy have no structural weaknesses that can lead to collapse. The Federal Emergency Management Agency (FEMA, 1985) has suggested the following seismic performance goals for health care facilities:

- The damage to the facilities should be limited to what might be reasonably expected after a destructive earthquake and should be repairable and not life-threatening.
- Patients, visitors, and medical, nursing, technical and support staff within and immediately outside the facility should be protected during an earthquake.
- Emergency utility systems in the facility should remain operational after an earthquake.
- Occupants should be able to evacuate the facility safely after an earthquake.
- Rescue and emergency workers should be able to enter the facility immediately after an earthquake and should encounter only minimum interference and danger.
- The facility should be available for its planned disaster response role after an earthquake.

1.6.3 Lifelines

Certain critical facilities designed to remain functional during and immediately after an earthquake may be able to provide the public with only limited services if the lifelines that they depend on are disrupted. Our understanding of the seismic hazards to new and existing lifeline facilities relies in great part on the several workshops and publications dedicated to the subject, including research completed as a result of the 1989 Loma Prieta earthquake. The issue of seismic hazard mitigation for lifelines is very complex, given the diversity of lifeline facilities. The general comments on the effect of strong ground motion to buildings apply to structures from where a given lifeline service is provided, such as the control tower in an airport, or the buildings housing the computers and telephone circuits central to the communication lifelines of a district. Properly designed, manufactured and laid out buried pipelines, in general, are not damaged by strong ground motions, but can be severely disrupted in areas of surface rupture, liquefaction, or landsliding. Some freeway interchanges and bridges have been damaged by strong ground motions in past earthquakes; certain bridge designs have been prioritized in retrofitting programs because of their poor past performance in regions of seismic activity.

A hazard analysis should focus on four lifeline categories: (1) water and sewer facilities, (2) transportation facilities, (3) electric power facilities, and (4) gas and liquid fuel lines. Retrofit and upgrading programs for lifelines generally require careful planning to ensure that the public is not inconvenienced by irregular or discontinued service. The extensive systems of cable and pipe used to distribute electrical energy, gas, telephone communications, and water, or to collect sewer and storm drain water also require that potential problem spots in the system be identified and prioritized for an effective mitigation program to be implemented.

1.7 HAZUS Earthquake Scenario Loss Estimation for the La Quinta Area

The development of HAZUSTM, the standardized methodology based on a geographic information system for earthquake loss estimation, is a project of the National Institute of Building Sciences, with funding from the Federal Emergency Management Agency (FEMA).

The primary purpose of the HAZUS project is to develop guidelines and procedures for making earthquake loss estimates at a regional scale. These loss estimates are to be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from earthquakes and to prepare for emergency response and recovery.

HAZUS is designed to produce loss estimates for use by state, regional and local governments in planning for earthquake loss mitigation, emergency preparedness and response and recovery. The methodology deals with nearly all aspects of the built environment, and with a wide range of different types of losses. The methodology has been tested against the experience from several past earthquakes and against the judgment of experts. Subject to several limitations noted below, HAZUS has been judged capable of producing results that are credible for the intended purposes.

Uncertainties are inherent in any such loss estimation methodology. They arise in part from incomplete scientific knowledge concerning earthquakes and their effect upon buildings and facilities, and in part from the approximations and simplifications necessary for comprehensive analyses.

Users should be aware of the following specific limitations:

- HAZUS is most accurate when applied to a class of buildings or facilities, and least accurate if applied to a particular building or facility.
- Accuracy of losses associated with lifelines may be less than for losses associated with the general building stock.
- Based on several initial abbreviated tests, the losses from small magnitude (less than M 6.0) earthquakes appear to be overestimated.
- Pilot and calibration studies have as yet not provided an adequate test concerning the possible extent and effects of landsliding.
- The indirect economic loss module is new and experimental. While output from pilot studies has generally been credible, this module requires further testing.

1.7.1 Methodology and Terminology Used in Earthquake Loss Estimation

The inventory (buildings and demographics) input to HAZUS are based on census tract boundaries that in turn conform to county and state boundaries rather than city boundaries. The census tract that best represent coverage for the City of La Quinta was chosen for this analysis (Census Tract No. 06065045104, see Appendix). Figure 1-7 presents a flow chart that represents the modules utilized in the HAZUS methodology.

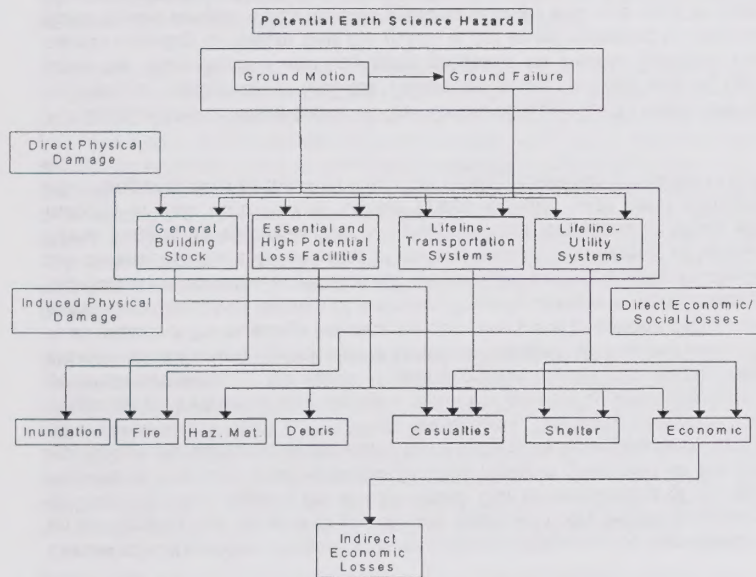


Figure 1-7: Flow chart illustrating HAZUS methodology

Essential Facilities: Essential facilities are those facilities that provide services to the community and should be functional after an earthquake. Essential facilities include hospitals, police stations, fire stations and schools. The damaged state probabilities for essential facilities are determined on a site-specific basis (i.e., the ground motion parameters are computed at the location of the facility), whereas, loss estimation for the general building stock are averaged for each census tract. The purpose of the essential facility module is to determine the expected loss of functionality for these critical facilities. Economic losses associated with these facilities are computed as part of the analysis of the general building stock. The data required for the analysis include mapping of essential facilities' occupancy classes to model building types, or a combination of essential facilities building type, design level and construction quality factor. In addition, the number of beds for each hospital and the number of fire trucks at each fire station are required. The fire truck information is used as input for the fire-following-earthquake analysis.

General Building Stock Type and Classification: HAZUS provides damage data for buildings based on type as follows:

- Concrete
- Mobile Home
- Precast Concrete
- Reinforced Masonry Bearing Walls
- Steel
- Unreinforced Masonry Bearing Walls
- Wood Frame

and, based on classification as follows:

- Residential
- Commercial
- Industrial
- Agriculture
- Religion
- Government
- Education

These inventory data are provided in Appendix B.

Damage Classification: The HAZUS output classifies building damage as ranging from slight to complete. The definitions used by HAZUS for wood frame (the City's most numerous building type) and mobile homes (one of the City's most vulnerable building types) are provided below:

Wood, Light Frame:

- **Slight Structural Damage:** Small plaster or gypsum-board cracks at corners of door and window openings and wall-ceiling intersections; small cracks in masonry chimneys and masonry veneer.
- **Moderate Structural Damage:** Large plaster or gypsum-board cracks at corners of door and window openings; small diagonal cracks across shear wall panels exhibited by small cracks in stucco and gypsum wall panels; large cracks in brick chimneys; toppling of tall masonry chimneys.
- **Extensive Structural Damage:** Large diagonal cracks across shear wall panels or large cracks at plywood joints; permanent lateral movement of floors and roof; toppling of most brick chimneys; cracks in foundations; splitting of wood sill plates and/or slippage of structure over foundations; partial collapse of "room-over-garage" or other "soft-story" configurations; small foundation cracks.
- **Complete Structural Damage:** Structure may have large permanent lateral displacement, may collapse, or be in imminent danger of collapse due to cripple wall failure or the failure of the lateral load resisting system; some structures may slip and fall off the foundations; large foundation cracks. Approximately 5% of the total area with complete structural damage is expected to be collapsed.

Mobile Homes:

- **Slight Structural Damage:** Damage to some porches, stairs or other attached components.
- **Moderate Structural Damage:** Major movement of the mobile home over its supports resulting in some damage to metal siding and stairs and requiring resetting of the mobile home on its supports.
- **Extensive Structural Damage:** Mobile home has fallen partially off its supports, often severing utility lines.
- **Complete Structural Damage:** Mobile home has totally fallen off its supports, usually severing utility lines, with steep jackstands penetrating through the floor. Approximately 5% of the total area of buildings with complete structural damage is expected to be collapsed.

Incorporation of Historic Building Code Design Functions: Estimates of building damage are provided for both "High", "Moderate" and "Low" seismic design criteria. Buildings of newer construction (e.g., post-1973) are best represented by "High" design functions. Buildings built after 1940, but before 1973, are best represented by "Moderate" design functions. If built before about 1940 (i.e., before significant seismic codes existed), "Low" seismic design criteria are more appropriate. The vast majority of buildings in the City of La Quinta are considered of "High" seismic design.

Fires Following Earthquakes: Fires following earthquakes can cause severe losses. These losses can sometimes outweigh the total losses from the direct damage caused by the earthquake, such as collapse of buildings and disruption of lifelines. Many factors affect the severity of the fires following an earthquake, including but not limited to: ignition sources, types and density of fuel, weather conditions, functionality of water systems, and the ability of fire fighters to suppress the fires.

It should be recognized that a complete fire-following-earthquake model requires extensive input with respect to the level of readiness of local fire departments and the types and availability (functionality) of water systems. To reduce the input requirements and to account for simplifications in the lifeline module, the fire-following-earthquake model presented here is simplified. In addition, while building upon past efforts, the model is still to be considered a technology which is in its maturing process. With better understanding of fires that will be garnered after future earthquakes, there will undoubtedly be room for improvement in forecasting capability.

Based upon the empirical record, and using judgment, it is estimated that about 70 percent of all fire ignitions start immediately after the earthquake. "Immediately" means that the fire ignition is discovered within a few minutes after the earthquake. The remaining ignitions start sometime after the earthquake, ranging from an hour to possibly a day or so after the earthquake. A typical cause of these later ignitions is the restoration of electric power. When power is restored, short circuits that occurred due to the earthquake become energized and can ignite fires. Similarly, when power is restored, items which have overturned, fallen onto range tops, etc., can ignite. If no one is present at the time electric power is restored, fire ignitions requiring fire department response can occur.

Debris Generation: This methodology adopts a similar empirical approach to estimate two different types of debris. The first is debris that falls in large pieces, such as steel members or reinforced concrete elements. These require special treatment to break into smaller pieces before they are hauled away. The second

type of debris is smaller and more easily moved with bulldozers and other machinery and tools. This includes brick, wood, glass, building contents and other materials.

Estimating Casualties: The methodology in estimating casualties in scenario earthquakes is based on the assumption that there is a strong correlation between building damage (both structural and non-structural) and the number and severity of casualties. In smaller earthquakes, non-structural damage will most likely control the casualty estimates. In severe earthquakes where there will be a large number of collapses and partial collapses, there will be a proportionately larger number of fatalities. Data regarding earthquake related injuries are not of the best quality. Data are not available across all model building types. Available data often have insufficient information about the type of structure in which the casualties occurred and the casualty generating mechanism.

The HAZUS casualty estimates are output based on the following injury classification scale:

Injury Severity Level	Injury Description
Severity 1	Injuries requiring basic medical aid without requiring hospitalization
Severity 2	Injuries requiring a greater degree of medical care and hospitalization, but not expected to progress to a life-threatening status
Severity 3	Injuries which pose an immediate life-threatening condition if not treated adequately and expeditiously. The majority of these injuries are the result of structural collapse and subsequent entrapment or impairment of the occupants.
Severity 4	Instantaneously killed or mortally injured

The methodology provides information necessary to produce casualty estimates for three times of day. The following time options are provided:

- Earthquake striking at 2:00 a.m. (night time)
- Earthquake striking at 2:00 p.m. (day time)
- Earthquake striking at 5:00 p.m. (commute time)

These scenarios are expected to generate the highest casualties for the population at home, the population at work/school and the population during rush hour, respectively.

Displaced Households/Shelter Requirements: Earthquakes can cause loss of function or habitability of buildings which contain housing units, resulting in

approximately predictable numbers of displaced households. These households may need alternate, short-term shelter that is typically provided by family or friends, or by relief organizations such as the Red Cross, Salvation Army, and others (such as public shelters at schools and churches). Another short-term shelter option is renting in a hotel, or renting vacant units (apartments or houses). For units where repair takes longer than a few weeks, long-term alternate housing can be accommodated by mobile homes imported to the area, occupancy of vacant units, and even emigrating from the impacted area. While the number of people seeking short-term public shelter is of great concern to emergency response organizations, the longer-term impacts on the housing stock are of great concern to local governments, such as cities and counties.

Economic Losses: The methodology provides estimates of the structural and nonstructural repair costs caused by building damage and the associated loss of building contents and business inventory. Building damage can also cause additional losses by restricting the building's ability to function properly. To account for this, business interruption and rental income losses are estimated.

Earthquakes may produce dislocations in economic sectors not sustaining direct damage (e.g. indirect economic losses). All businesses are forward-linked (rely on regional customers to purchase their output) or backward-linked (rely on regional suppliers to provide their inputs) and are thus potentially vulnerable to interruptions in their operation. Such interruptions are called indirect economic losses. Note that these losses are not confined to immediate customers or suppliers of damaged enterprises. All of the successive rounds of customers of customers, and suppliers of suppliers are impacted. In this way, even limited earthquake physical damage causes a chain reaction, or ripple effect, that is transmitted throughout the regional economy.

1.7.2 HAZUS Scenario Earthquakes

Two scenario earthquakes were chosen to input into the HAZUS loss estimation (Table 1.4). Contour mapping in the La Quinta area of estimated ground accelerations is illustrated on Figure 1-8. These are the maximum probable earthquake (MPE) and the maximum credible earthquake (MCE). The MPE represents the event that has a "probable" chance of occurring within a specific (± 50 year) time period. The earthquake chosen to represent MPE ground shaking is a magnitude 7.2 earthquake on the San Jacinto fault that was also chosen to approximate moderate San Andreas earthquakes that may involve only the Coachella segment.

The MCE event represents the largest earthquake expected under the currently known tectonic framework of the area with very little emphasis given toward the

recurrence interval of such an event. MCE scenarios provide useful information for emergency response training and for design of critical facilities. The MCE chosen for this scenario is a M 8.0 earthquake that would involve rupture of the entire southern segment (± 180 miles) of the San Andreas fault.

Table 1.4: HAZUS Scenario Earthquakes

Event	Location	Size	Description
Maximum Probable Earthquake (MPE)	San Jacinto fault, ± 10 miles southwest of City	M 7.2	Also approximates a moderate sized San Andreas earthquake generated by rupture of the Coachella segment only
Maximum Credible Earthquake (MCE)	San Andreas fault, ± 3 miles northeast of the City	M 8.0	Involves simultaneous rupture of all three southern segments of San Andreas fault

1.7.3 City of La Quinta Inventory Data

HAZUS uses census tract data provided in the 1990 national census. Therefore, the building and population inventory data conform to census tract boundaries that in turn conform to county and state boundaries rather than city boundaries. For this analysis, a census tract was chosen (Census Tract No. 06065045104) that represent most of the City's population and building inventory. The census tract chosen does not include much of the undeveloped northernmost and southernmost portions of the City and its sphere of influence. However, portions of Indian Wells and Palm Desert are included. The inclusion of these areas may better represent the actual conditions at the City, given how much the population of this area has grown since the 1990 census and 1994 Dun and Bradstreet inventory.

All 1990 demographic data for the census tract that best represents the City of La Quinta are included in Appendix B. A summary is provided below:

Census Tract	1990 Population	1990 Households
06065045104	13,392	5,038

City of La Quinta General Plan (exhibit map)

LEGEND

- Roads
- - - Township/Range Sections
- + + + Railroads
- City Limits
- - - General Plan Planning Area
- · · City Sphere of Influence

Figure 1-8: Estimated Acceleration
Contours, HAZUS Design
Earthquakes

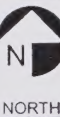
0.30g Estimated peak horizontal ground accelerations at bedrock based on a M 8.0 San Andreas earthquake expressed as a percentage of gravity.

0.22g Estimated peak horizontal ground accelerations at bedrock based on a M 7.2 San Jacinto fault earthquake expressed as a percentage of gravity.

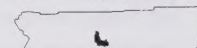
Prepared by: Earth Consultants International for
Terra Nova Planning & Research, Inc.

Scale

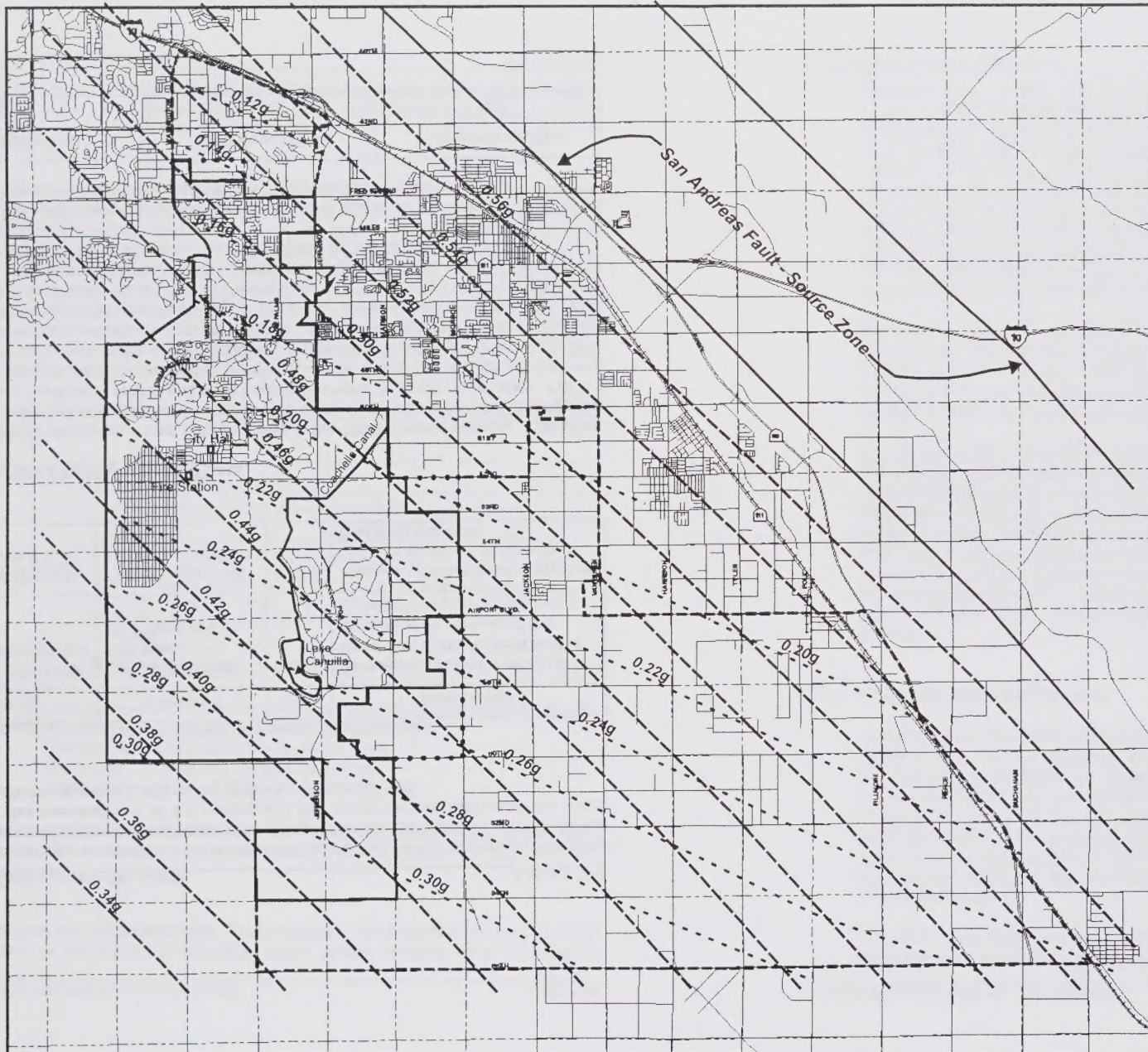
0 6,260 12,660 18,760
Feet



Riverside County Vicinity Map



Map prepared on July 10, 2000
Map prepared by: Aerial Information Systems
Map Version No. 6



Essential Facilities: Essential facilities in the HAZUS inventory include the City of La Quinta Fire Department located on Avenue 52, and the City Police Department located on Calle Tampico.

Schools: Three area schools are included in this analysis.

Building Stock: According to the 1990 census data more than \$1 billion in building stock are exposed to the scenario earthquakes in the City of La Quinta area. Additional detail on exposure of building stock by building type (wood, steel, mobile, etc.), and by general occupancy (residential, commercial, government, etc.), are provided in the Appendix. Over \$900 million of the exposed building stock is residential. HAZUS does not include inventory data for unreinforced masonry.

1.7.4 Estimated Losses Associated with a M 7.2 San Jacinto Fault Earthquake

This event was chosen as the MPE because it has a finite chance of occurring within the lifetimes of structures in the City of La Quinta. Based on historic seismicity and the current knowledge of the tectonic framework of the area, the probability of the City experiencing ground shaking levels similar to the MPE is about 50 percent in the next 50 years.

- The HAZUS loss estimates for a M 7.2 San Jacinto earthquake indicate that the City of La Quinta may suffer economic damages of about \$100 million.
- While about 40% of the building stock will escape undamaged, less than 5% of mobile homes and pre-1940 building stock will escape with no damage. No modern wood-frame structures are expected to suffer extensive or complete damage.
- Casualty estimates range from 10 to 33 persons, with fewer than 6 requiring hospitalization, and no fatalities. The greatest casualty estimates are for a night-time occurrence, rather than a daytime or commute-time event.
- HAZUS estimates that 71 households will be displaced, with 43 of the households requiring short-term shelter.
- One fire ignition in the City may result from this earthquake and an estimated 65 thousand tons of debris is projected.

The detailed HAZUS data are presented in the Appendix, while some key parameters are summarized below:

Building damage estimates due to a M 7.2 San Jacinto Fault Earthquake: The HAZUS estimates indicate that mobile homes in the City will be the most vulnerable to the MPE.

Building Type	No Damage (%)	Slight Damage (%)	Moderate Damage (%)	Extensive Damage (%)	Complete (%)
Mobile Home (pre-1940)	2	5	20	42	31
Mobile Home (1940-1973)	8	20	41	27	4
Mobile Home (post-1973)	8	20	41	27	4

The most common construction type in the City (modern wood-frame) is expected to perform relatively well:

Building Type	No Damage (%)	Slight Damage (%)	Moderate Damage (%)	Extensive Damage (%)	Complete (%)
Wood Frame (pre-1940)	8	19	46	20	8
Wood Frame (1940-1973)	50	34	14	2	0
Wood Frame (post-1973)	59	34	6	0	0

1.7.5 Estimated Losses Associated with a M 8.0 San Andreas Earthquake

This event was chosen as the MCE because the San Andreas fault is the closest major fault to the City and the magnitude 8.0 earthquake is the largest the fault is believed to be capable of generating. It is an event that is likely to occur only once every several hundred years, but should it occur tomorrow, this loss estimation approximates the casualties and damage for the City of La Quinta.

- The HAZUS loss estimation for the MCE indicate that the City of La Quinta may suffer total economic damages exceeding \$280 million dollars.
- Functionality of the City's fire and police stations are estimated at less than 8% at one-day after the earthquake.
- Slightly greater than 16% of the City's capital stock (buildings and inventory) may be lost.
- HAZUS estimates that only about one in ten buildings will escape undamaged by the MCE, with high rates of damage for mobile homes and pre-1940 construction.
- Casualty estimates range from 43 to 145 persons with 7 to 24 requiring hospitalization, and one or two fatalities are projected.
- HAZUS estimates that 314 of the City's households will be displaced with 190 requiring short-term shelter.
- Less than 10% of the area's schools are expected to be operational following the MCE.
- Two major fire ignitions in the City resulting in \$0.5 million in damages are projected.
- An estimated 198 thousand tons of debris will be generated in the City as a result of the MCE.

The detailed HAZUS data are presented in the Appendix; some key parameters are summarized below:

Building damage estimates due to M 8.0 San Andreas earthquake: The HAZUS estimates indicate that about 90% of the City's buildings will suffer at least slight damage.

Building Type	No Damage (%)	Slight Damage (%)	Moderate Damage (%)	Extensive Damage (%)	Complete (%)
Mobile Home (pre-1940)	0	1	5	16	78
Mobile Home (1940-1973)	0	4	23	41	31
Mobile Home (post-1973)	0	4	23	41	31

Most of the City's wood-frame buildings will receive at least some damage:

Building Type	No Damage (%)	Slight Damage (%)	Moderate Damage (%)	Extensive Damage (%)	Complete (%)
Wood Frame (pre-1940)	0	2	16	35	46
Wood Frame (1940-1973)	12	34	40	11	3
Wood Frame (post-1973)	20	49	27	2	0

1.8 Reducing Earthquake Hazards in the City of La Quinta

This section identifies and discusses the opportunities available for seismic upgrading of existing development and capital facilities, including potentially hazardous buildings and other critical facilities. Many of the issues and opportunities available to the City apply to new development, redevelopment and infilling. Issues involving rehabilitation and strengthening of existing development are decidedly more complex given the economic and societal impacts inherent to these issues.

Prioritizing rehabilitation and strengthening projects requires that the City consider where its resources would be better spent to reduce earthquake hazards in the existing development, and how the proposed mitigation programs can be implemented so as not to cause undue hardship on the community.

Rehabilitation programs should target, on a priority basis, potentially hazardous buildings, critical facilities, and high-risk lifeline utilities. Rehabilitation issues can be best addressed by the City. However, the hazard evaluation is intended to define the scope of the problem.

Recent earthquakes, with their relatively low loss of life, have demonstrated that the best mitigation technique in earthquake hazard reduction is our constant improvement of building codes with the incorporation of the lessons we have learned from each earthquake experience. Our most recent building codes (1997) are a prime example of incorporating lessons from past earthquakes to further reduce earthquake hazards. However, while new building codes reduce the hazard, increases in population leading to building in vulnerable areas and the aging of the existing building stock work toward increasing the earthquake hazard of a given region.

1.8.1 1997 Uniform Building Code Impacts on the City of La Quinta: Two significant changes are incorporated into the 1997 Uniform Building Code (UBC) that impact the City of La Quinta. The City of La Quinta Department of Building and Safety adopted this code on July 1st, 1999. The first change is a revision to soil types and amplification factors, and the second change is the incorporation of the proximity of earthquake sources in UBC seismic zone 4, which includes the City of La Quinta. These changes represent the most significant increases in ground shaking criteria in the last 30 years. In addition, in the new code, soil effects now impact buildings of short predominant period of ground shaking (low-rises), whereas in the past, only long-period structures (high-rises) were influenced by UBC requirements. Although the new ground-shaking basis for code design is now more complicated because of the wide range of soil types, these code changes are warranted, especially in areas such as La Quinta, that are in close proximity to seismic sources. The new soil effects are based on observations made as a result of the Mexico City and Loma Prieta earthquakes, and impact all buildings in the City of La Quinta. Due to

the proximity of the San Andreas fault system, the entire City is impacted by the new near-source design factors (see Figure 1-9). The 1997 UBC contains detailed descriptions of the incorporation of these new parameters; only a summary is provided below:

Soil Types and Soil Amplification Factors: The seismic design response spectra are defined in terms of two site-specific seismic coefficients: C_a and C_v . These coefficients are determined as a function of the following parameters:

- Seismic Zone
- Soil Type, and
- Near Source Factors (UBC Zone 4 only)

The UBC defines six soils types based on the average soil properties for the top 100 feet of the soil profile (see table below). An estimation of the UBC soil types, based on regional geologic mapping, for the City of La Quinta and its sphere of influence are illustrated on Figure 1-9. The soil types illustrated in Figure 1-9 were selected to represent a worst-case profile and site specific evaluation by the project geotechnical engineer may result in more favorable profile conditions. The soil type parameters are intended to be used by project engineers with Tables 16-S and 16-T of the 1997 UBC. A general description of the 1997 UBC soil types are outlined, below:

Soil Profile Type	Soil Profile Name/Generic Description	Average Soil Properties for the Upper 100 Feet		
		Shear Wave Velocity (feet/second)	Standard Penetration Test (blows/foot)	Undrained Shear Strength (psf)
S_A	Hard Rock (generally not found in western U.S.)	>5,000		
S_B	Rock	2,500 to 5,000		
S_C	Very dense soil and soft rock	1,200 to 2,500	>50	>2,000
S_D	Stiff soil profile	600 to 1,200	15 to 50	1,000 to 2,000
S_E^1	Soft soil profile	<600	<15	<1,000
S_F	Soil requiring site-specific evaluation.			

City of La Quinta General Plan (exhibit map)

LEGEND

- Roads
- - - Township/Range Sections
- Railroads
- City Limits
- - - General Plan Planning Area
- ... City Sphere of Influence

Figure 1-9: Near Source Zones
and Soil Type
1997 Uniform Building Code

Soil Profile Type	Soil Profile Name/Generic Description	Average Soil Properties for the Upper 100 Feet		
		Shear Wave Velocity (feet/second)	Standard Penetration Test (blows/foot)	Undrained Shear Strength (psf)
SA	Hard Rock	>5,000		
SE	Rock	2,500 to 5,000		
SC	Very dense soil and soft rock	1,200 to 2,500	>50	>2,000
SO	Stiff soil profile	600 to 1,200	15 to 50	1,000 to 2,000
SE1	Soft soil profile	<600	<15	<1,000
SR	Soil requiring site-specific evaluation.			

The soil types illustrated herein are based on regional mapping and should not substitute for site-specific evaluation. This map is intended to be used with the 1997 Uniform Building Code, Tables 16-S and 16-T.

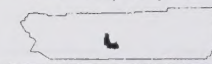
Prepared by: Earth Consultants International for Terra Nova Planning & Research

Scale

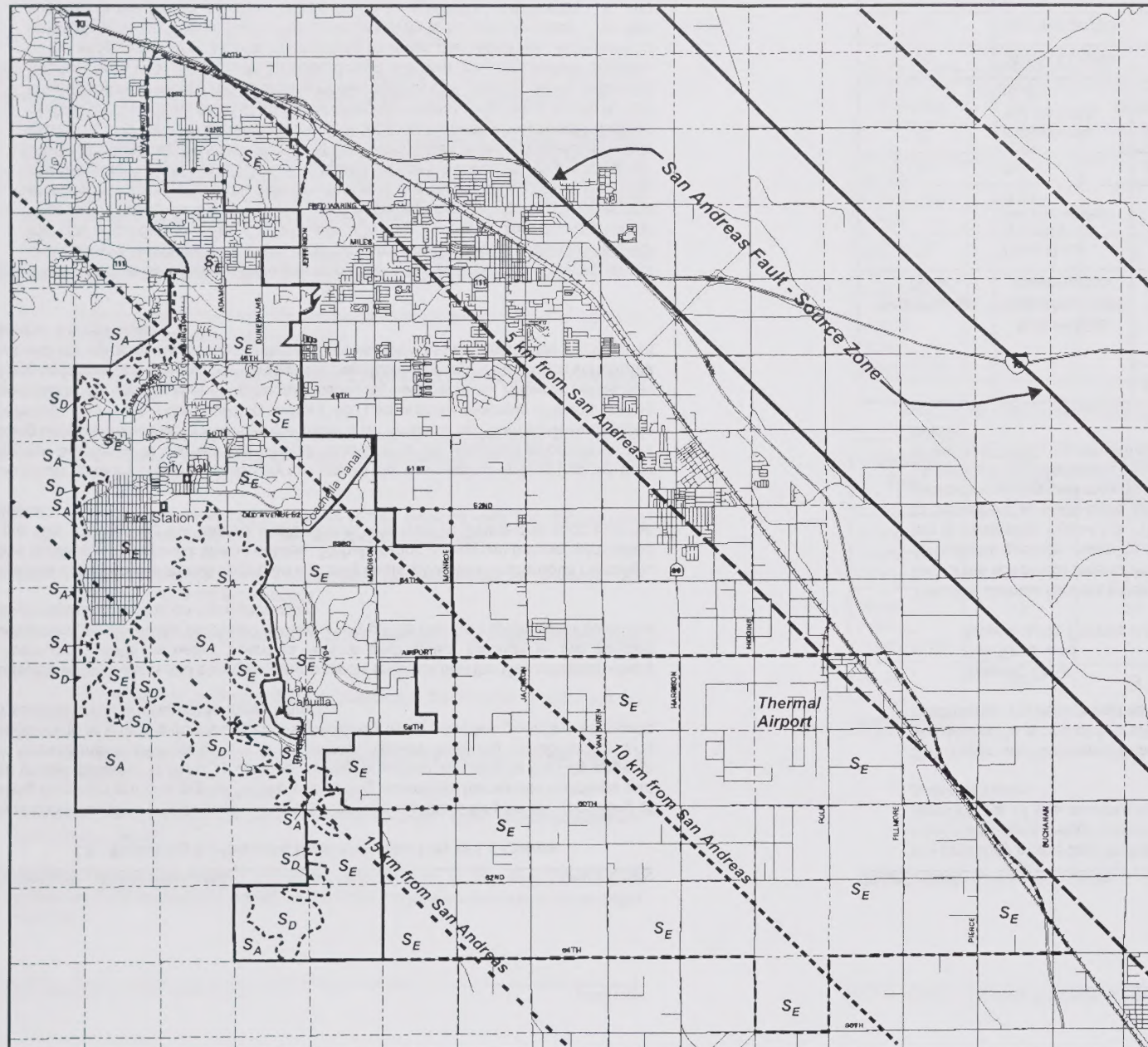
0 5,833.3 11,666.7 17,500
Feet



Riverside County Vicinity Map



Map prepared on August 23, 1999
Map prepared by: Aerial Information Systems
Map Version No. 2



Near Source Factors: The entire City of La Quinta (Figures 1-9 and 1-10) is subject to near-source design factors based on the proximity of the San Andreas fault system. These parameters, new to the 1997 Uniform Building Code (UBC), address the proximity of potential earthquake sources (faults) to the site. These factors were present in earlier versions of the UBC for implementation into the design of seismically isolated structures. The adoption into the 1997 code for all buildings in UBC zone 4 was a result of the observation of more intense ground shaking than expected near the fault ruptures at Northridge in 1994, and again one year later at Kobe, Japan. The 1997 UBC also includes a near-source factor that accounts for directivity of fault rupture. The direction of fault rupture was observed to play a significant role in distribution of ground shaking at Northridge and Kobe. For Northridge, much of the earthquake energy was released into the sparsely populated mountains north of the San Fernando Valley, while at Kobe, the rupture direction was aimed at the City and was a contributing factor in the extensive damage. However, the rupture direction of a given source cannot be predicted, and as a result, the UBC requires a general increase in estimating ground shaking of about 20% to account for directivity.

Seismic Source Type: Near source factors also include a classification of seismic sources based on slip rate and maximum magnitude potential. These parameters are used in the classification of three seismic source types (A, B and C), below:

Seismic Source Type	Seismic Source Description	Seismic Source Definition	
		Maximum Moment Magnitude, M	Slip Rate, SR (mm/yr)
A	Faults that are capable of producing large magnitude events and which have a high rate of seismicity.	$M \geq 7.0$ and	$SR \geq 5$
B	All faults other than Types A and C.		
C	Faults which are not capable of producing large magnitude earthquakes and which have a relatively low rate of seismic activity.	$M < 6.5$	$SR \leq 2$

Type A faults are active and capable of producing large magnitude events. Most segments of the San Andreas fault are classified as type A. The Type A slip rate (>5 mm/yr) is common only to tectonic plate boundary faults and is approximate to the rate at which a human fingernail grows. Type C seismic sources are considered to be sufficiently inactive and not capable of producing large magnitude events such that potential ground shaking effects can be ignored. Type B sources include most of the active faults in California and include all faults that are neither Type A nor C. Both the San Andreas and San Jacinto faults nearest the City are considered Type A faults. The 1997 UBC requires that the locations and characteristics of these faults be established based on reputable sources such as the California Division of Mines and Geology (CDMG) and the U.S. Geological Survey (USGS).

To establish near-source factors for any proposed project in the City of La Quinta, the first step is to identify and locate known active faults in the region. The International Conference of Building Officials (ICBO) has provided an Atlas of the location of known faults for California to accompany the 1997 UBC. Data from this Atlas for the vicinity of La Quinta is shown on Figure 1-10, and is intended to be used by project engineers with Tables 16-S and 16-T of the 1997 UBC.

The rules for measuring distance from a fault are provided by the 1997 UBC. The criteria for determining distance to vertical faults, such as the San Andreas, are relatively straightforward. However, the distance to thrust faults and blind thrust faults is assumed as 0 for anywhere above the dipping fault plane to a depth of 10 kilometers. This greatly increases the areal extent of high ground shaking parameters, but is warranted based on observations of ground shaking at Northridge.

Summary: Seismic codes are now undergoing their most significant changes in history. These improvements are a result of experience in recent earthquakes, as well as extensive research under the National Earthquake Hazard Reduction Program (NEHRP). Inclusion of soil and near-field effects in the 1997 UBC represents a meaningful and impactful change put forth by the geoscience community. Seismic codes will continue to improve under the International Building Code, which will replace the UBC beginning in the year 2000.

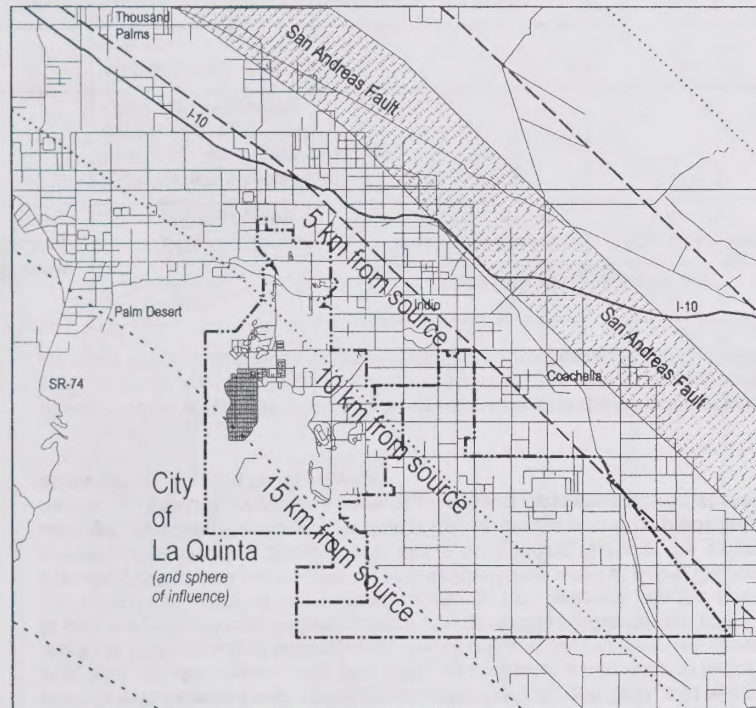


Figure 1-10: Excerpt of atlas of known active faults prepared by the California Division of Mines and Geology (CDMG) to support the 1997 Uniform Building Code implementation of near-source factors. All sites located within 15 km of known active faults, as shown, require near-source design parameters.

1.8.2 Retrofit and Strengthening of Existing Structures

While the earthquake hazard mitigation improvements associated with the new building codes address new construction, the retrofit and strengthening of existing structures requires the adoption of ordinances. The City of La Quinta is required by State law to adopt an ordinance aimed at retrofitting unreinforced masonry buildings (URMs). Typically, the next logical step is to conduct an inventory of other potentially hazardous buildings, such as pre-1971 concrete tilt-up buildings. Although retrofit buildings may still incur severe damage during an earthquake, the mitigation results in a substantial reduction of casualties by preventing collapse.

The UBC is not retroactive, and past earthquakes have shown that many other types of structures besides URMs are potentially hazardous. Structures built before the lessons learned from the 1971 Sylmar earthquake are particularly susceptible to damage during an earthquake, including pre-cast tilt-up concrete buildings, soft-story structures, unreinforced concrete buildings, as well as pre-1952 single-family structures. Other potentially hazardous buildings include irregular-shaped structures and mobile homes.

The City should consider developing a program by which non-URM, potentially hazardous buildings are identified. Potentially hazardous buildings can be identified and inventoried following the recommendations set forth in publications such as "Rapid Visual Screening of Buildings for Potential Seismic Hazards: Handbook and Supporting Documentation" and "A Handbook for Seismic Evaluation of Existing Buildings and Supporting Documentation", both prepared by the Applied Technology Council in Redwood City, California, and supplied by the Federal Emergency Management Agency (FEMA publications 154 and 155, and 175 and 178, respectively).

The societal and economic implications of rehabilitating existing buildings are discussed in many publications, including "Establishing Programs and Priorities for the Seismic Rehabilitation of Buildings - A Handbook and Supporting Report", "Typical Costs for Seismic Rehabilitation of Existing Buildings: Summary and Supporting Documentation," (FEMA Publications 174 and 173, and 156 and 157, respectively). Another appropriate source is the publication prepared by Building Technology, Inc. entitled "Financial Incentives for Seismic Rehabilitation of Hazardous Buildings - An Agenda for Action (Report and Appendices).

The building inventory phase of a seismic hazard mitigation program should accurately record the potentially hazardous buildings in an area. To do so, a GIS system would be invaluable. The data base should include information such as the location of the buildings, the date and type of construction, construction materials and type of structural framing system, structural conditions, number of floors, floor area, occupancy and relevant characteristics of the occupants (such as whether the

building houses predominantly senior citizens, dependent care or handicapped residents, etc.), and information on structural elements or other characteristics of the building that may pose a threat to life.

Once buildings are identified as potentially hazardous, a second, more thorough analysis may be conducted. This step may be carried out by local officials, such as the City's building department, or building owners may be required to submit a review by a certified structural engineer that has conducted an assessment of the structural and non-structural elements and general condition of the building, and has reviewed the building's construction documents (if available). The nonstructural elements should include the architectural, electrical and mechanical systems of the structure. Cornices, parapets, chimneys and other overhanging projections should be addressed too, as these may pose a significant threat to passersby, and to individuals who, in fear, may step out of the building during an earthquake. State of repair of buildings should also be noted, including cracks, rot, corrosion, and lack of maintenance, as these conditions may decrease the seismic strength of a structure. Occupancy should be noted as this factor is very useful in prioritizing the buildings to be abated for seismic hazards.

For multi-story buildings, large occupancy structures, and critical facilities, the seismic analysis of the structure should include an evaluation of the site-specific seismic environment (e.g., response spectra, estimates of strong ground motion duration, etc.), and an assessment of the building's loads and anticipated deformation levels. The resulting data should be weighted against acceptable levels of damage and risk chosen by the City for that particular structure. Once these guidelines are established, mitigation techniques available (including demolition, strengthening and retrofitting, etc.) should be evaluated, weighted, and implemented.

The City of La Quinta should set a list of priorities by which strengthening of the buildings identified as hazardous will be established and conducted. Currently, there are no Federal- or State-mandated criteria established to determine the required structural seismic resistance capacity of structures. Retrofitting to meet the most current UBC standards may be cost-prohibitive, and therefore, not feasible. The City may develop its own set of criteria, however, this task should be carried out following a comprehensive development and review process that involves experienced structural engineers, building officials, insurance representatives, and legal authorities. Selection of the criteria by which the structural seismic resistance capacity of structures will be measured may follow a review of the performance during an earthquake of similar types of buildings that had been retrofit prior to the seismic event. Upgrading potentially hazardous buildings to, for example, 1973 standards may prove inefficient if past examples show that similar buildings retrofit to 1973 construction codes performed poorly during a particular earthquake, and had to be demolished anyway. Issues to be addressed include justification for

strengthening a building to a performance level less than the current code requirements, the potential liabilities and limitations on liability, and the acceptable damage to the structure after strengthening (FEMA, 1985).

The mitigation program established by the City could be voluntary or mandatory. Voluntary programs to encourage mitigation of potentially hazardous buildings have been implemented with various degrees of success in California. Incentives that have been used to engender support among building owners include tax waivers, tax credits, waivers from certain zoning restrictions, etc. Other cities have required a review by a structural engineer when the building is undergoing substantial improvements.

The mitigation program should give priority to buildings that house 20 or more people (medium- and high-risk buildings), and buildings that are located in areas of high-liquefaction potential. For potentially hazardous residential structures, the City could implement an educational program (that relies, for example, on informational mailings) to encourage private owners to seismically upgrade their houses.

1.8.3 Reducing Liquefaction and Ground Failure Hazards in the City of La Quinta

Adoption of new building codes also do not mitigate local secondary earthquake hazards such as liquefaction and ground failure. Therefore, these issues are best mitigated at the local level. Much of the areal extent of the City of La Quinta and its sphere of influence is identified as susceptible to the secondary earthquake hazards of liquefaction and seismically induced settlement (see Figures 1-3 and 1-4). As a result, avoidance of the hazard is not considered feasible. Although lower density development may be considered, many of the mitigation opportunities such as dewatering and ground improvement, are more feasible when associated with higher density development.

Liquefaction Mitigation Issues: Potentially liquefiable sediments and high groundwater conditions currently underlie the eastern portion of the City, and with rising groundwater levels, much more of the City may be impacted. In addition, settlement of valley fill during an earthquake may result in ground rupture along the valley margins. Site-specific studies addressing liquefaction potential should be required prior to development or significant redevelopment in these areas. Locally, sediment may be found too dense or ground water too deep to result in liquefaction during significant ground shaking. However, studies should address seasonal fluctuations and residential irrigation effects on future groundwater levels. Site-specific geotechnical investigations for conventional facilities should evaluate the liquefaction potential of sediments within 30 feet of the surface; studies for critical facilities should extend to 50 feet from the surface. If a site-specific study

has determined that a site is underlain by liquefiable sediments, there are several mitigation measures that can be applied. These include:

- Replacing the existing soil with non-liquefiable material;
- emplacing permeable columns of gravel that provide a release mechanism for water pressures that may build up and cause liquefaction;
- densifying the soil using any of several types of dynamic or vibratory compaction equipment; and
- lowering the water levels using dewatering wells or drains.

The City should consider requiring the structural mitigation of buildings over 2- or 3-stories high, or with over 2,000 pounds per square foot of structural load in liquefaction-prone areas. Smaller buildings and private residences may also be mitigated at the discretion of building officials, the owners, or the developers. Building design provisions that may be used to decrease the risk of structural failure as a result of liquefaction include deep pilings for structures built on or adjacent to stream channel areas, and post-tensioned slab foundations for residential structures and large subdivisions or industrial facilities.

Zoning overlays that augment the City's land use and zoning ordinance can be developed to restrict development in liquefaction-prone areas, to identify those areas where more detailed geotechnical studies should be carried out as part of a liquefaction-susceptibility investigation, or to establish specific building design standards aimed at reducing the risk of liquefaction.

Slope Stability Issues: Mitigation of the rockfall hazard is discussed in detail in Chapter 2 - Geologic Hazards of this report. The steep mountainous terrain ascending abruptly from the valley margins make these areas susceptible to rockfall.

1.9 Summary

Since it is not possible to prevent an earthquake from occurring, local governments, emergency relief organizations, and residents are advised to take action and develop and implement policies and programs aimed at reducing the effects of earthquakes. Individuals should also exercise prudent planning to provide for themselves and their families in the aftermath of an earthquake.

Earthquake Sources:

- The closest major fault to the City is the Coachella Valley segment of the San Andreas fault. The San Andreas fault passes within about 3 miles to the northeast of the City and as a result, the new (1997) Uniform Building Code requires that the City incorporate near-source factors into design of new buildings. In addition to the San Andreas, the San Jacinto and Elsinore fault zones are likely sources of earthquakes that may impact the City.
- No evidence of active or potentially active faulting was found within the plan area, and no geologic evidence has been found to support the inferred faulting illustrated by BRW, Inc. (1992) in the City's previous Safety Element. However, much of the plan area is located within 15 kilometers of the San Andreas fault, and a major ground rupturing earthquake on the San Andreas could result in smaller secondary displacements within the plan area. As a result, all proposed essential or critical facilities as defined in section 1.6.2 within the plan area should address the potential for ground rupture, and the seismic hazard mapping presented herein should be modified if new information is made available.
- Geologists, seismologists, engineers and urban planners typically use maximum credible and maximum probable earthquakes to evaluate the seismic hazard of a region, the assumption being that if we plan for the worst-case scenario, smaller earthquakes that are more likely to occur can be dealt with more effectively.
- A number of historic earthquakes have caused significant ground shaking within the City of La Quinta. However, in view of the major fault systems close to the City, it is unusual that no significant historic earthquakes have occurred within 20 miles of the City.
- Of the historic earthquakes, the City of La Quinta area experienced the most severe shaking (MMI VI) as a result of the 1992 M 7.3 Landers and 1999 M 7.1 Hector Mine earthquake.

Design Earthquake Scenarios:

- A worst-case scenario earthquake (maximum credible) for La Quinta may be a magnitude 8.0 involving rupture of the entire southern portion of the San Andreas fault. Damage in the general plan area as a result of a major San Andreas earthquake would be extensive: those portions underlain by ground water within 50 feet of the ground surface may liquefy, and rockfalls will occur along the valley margins. In addition, the valley margins will be vulnerable to ground rupture related to settlement of the valley fill near its contact with the adjacent granitic bedrock. Mobile homes slipping from their foundations might ignite fires.
- Probable earthquake events, that is earthquakes that are likely to occur during the design life of most buildings, include a major San Jacinto earthquake or a moderate San Andreas event that involves only the Coachella Valley segment (± 60 miles). This event would be expected to damage vulnerable structures, such as potentially hazardous buildings, and result in localized ground failures in the general plan area.

Secondary Earthquake Effects:

- While no known active or potentially active faults are known to transect the City of La Quinta or its sphere of influence, a significant portion of the City is susceptible to the secondary earthquake effects of liquefaction and settlement.
- Currently, only the easternmost portion of the City has ground water that is close enough to the ground surface (< 50 feet) that liquefaction could occur. However, prior to agricultural development of the region, groundwater levels were much higher. It is possible that the entire Coachella Valley was once susceptible to liquefaction failure, and with the advent, in recent years, of imported water and ground-water recharge from the Colorado River, the area may be susceptible to liquefaction again in the future. However, seasonal fluctuations and the introduction of residential irrigation requires that site specific investigation be completed to support these generalizations.
- A large ground fissure documented in 1948 occurred in the central portion of the City. This fissure was likely related to groundwater withdrawal, but illustrates that sediments in the heart of the City are vulnerable to settlement.
- In addition to liquefaction, strong earthquake shaking has been observed to cause settlement of valley alluvial soils. Especially vulnerable are the valley margins, as this is where fissures can concentrate and displacements, as in the 1994 Northridge earthquake, can occur. These valley margins are also susceptible to earthquake-induced rockfall.

Vulnerability:

- Most of the loss of life and injuries that occur during an earthquake are related to the collapse of hazardous buildings and structures.
- The City of La Quinta is required by state law to adopt an Unreinforced Masonry Ordinance requiring retrofit of URM's. Inventory of other potentially hazardous structures, such as concrete tilt-up is recommended.
- Mobile homes are considered potentially hazardous structures during earthquakes, and permit records indicate that about 300 of them exist in the City. Severe damage to mobile homes occurs when they fall off their supports, usually severing utility lines, with steep jackstands penetrating through the floor. The relatively high density of these units also makes them especially vulnerable to earthquake induced-fires.

Estimated Losses Associated with a M 7.2 San Jacinto Fault Earthquake:

- This event was chosen as the Maximum Probable Earthquake (MPE) because it has a high probability of occurring within the lifetime of structures in the City of La Quinta. This scenario also approximates the type of losses expected from a moderate San Andreas fault earthquake. Based on the historic seismicity and current knowledge of the tectonic framework of the area, the probability that the general plan area will experience ground shaking levels similar to the MPE is about 50 percent in the next 50 years.
- The HAZUS loss estimates from a M 7.2 San Jacinto earthquake indicate that the City of La Quinta may suffer economic damages of about \$100 million. While about 40% of the building stock will escape undamaged, less than 5% of the mobile homes and pre-1940 building stock will escape with no damage. No modern wood-frame structures are expected to suffer extensive or complete damage.
- Casualty estimates range from 10 to 33 persons with fewer than 6 requiring hospitalization, and no fatalities. The greatest casualty estimates are for a night-time occurrence, rather than a daytime or commute-time event. HAZUS estimates that 71 households will be displaced, with 43 of the households requiring short-term shelter.
- One fire ignition in the City may result from this earthquake. An estimated 65 thousand tons of debris are projected to be generated by this scenario earthquake.

Estimated Losses Associated with a M 8.0 San Andreas Earthquake:

- This event was chosen as the Maximum Credible Earthquake (MCE) because the San Andreas fault is the closest major fault to the City and the magnitude 8.0 earthquake is the largest the fault is believed to be capable of generating. It is an event that likely occurs only once every several hundred years, but should it occur tomorrow, this loss estimation approximates the casualties and damage for the City of La Quinta.
- The HAZUS loss estimation for the MCE indicate that the City of La Quinta may suffer economic damages exceeding \$280 million dollars.
- Functionality of the City's fire and police stations are estimated at less than 8% one day after the earthquake.
- Slightly more than 16% of the City's capital stock (buildings and inventory) may be lost. HAZUS estimates that only about one in ten buildings will escape undamaged by the MCE, with higher rates of damage for mobile homes and structures built before 1940.
- Less than 10% of the area's schools are expected to be operational following the MCE.
- Casualty estimates range from 43 to 145 persons, with 7 to 24 requiring hospitalization and one to two fatalities are projected. HAZUS estimates that 314 of the City's households will be displaced, with 190 requiring short-term shelter.
- Two major fire ignitions in the City resulting in \$0.5 million in damages are projected. An estimated 198 thousand tons of debris will be generated in the City as a result of the MCE.

Earthquake Hazard Reduction:

- The best mitigation technique in earthquake hazard reduction is our constant improvement of building codes with the incorporation of the lessons we have learned from each earthquake experience. Our most recent building codes (1997) incorporate two significant changes that impact the City of La Quinta and its sphere of influence. The first change is a revision to soil types and amplification factors, and the second change is the incorporation of the proximity of earthquake sources in UBC seismic zone 4, which includes the City of La Quinta. Therefore, adoption and implementation of these codes for the City is warranted. Seismic codes will continue to improve under the International Building Code, which will replace the UBC beginning in the year 2000.

- The entire City of La Quinta is subject to near-source design factors based on the proximity of the San Andreas fault. These parameters, new to the 1997 Uniform Building Code (UBC), address the proximity and the potential of earthquake sources (faults) to the site.
- While the earthquake hazard mitigation improvements associated with the new 1997 UBC address new construction, the retrofit and strengthening of existing structures requires the adoption of ordinances. The City of La Quinta is required by State law to adopt an ordinance aimed at retrofitting unreinforced masonry buildings (URMs). Although retrofit buildings may still incur severe damage during an earthquake, their mitigation results in a substantial reduction of casualties by preventing collapse.
- Adoption of new building codes also does not mitigate local secondary earthquake hazards such as liquefaction and ground failure. Therefore, these issues are best mitigated at the local level. Avoidance of the liquefaction, settlement and earthquake induced rockfall hazards is not considered feasible, as about 40% of the areal extent of the City is underlain by geological units susceptible to these hazards. The best alternative for the City is to require "special studies" within these zones for new construction, as well as for significant redevelopment, and require implementation of the subsequent engineering recommendations for mitigation.

**TECHNICAL BACKGROUND REPORT
GENERAL PLAN UPDATE - CITY OF LA QUINTA
CHAPTER 2: GEOLOGIC HAZARDS**

2.1 Physiographic and Geologic Setting

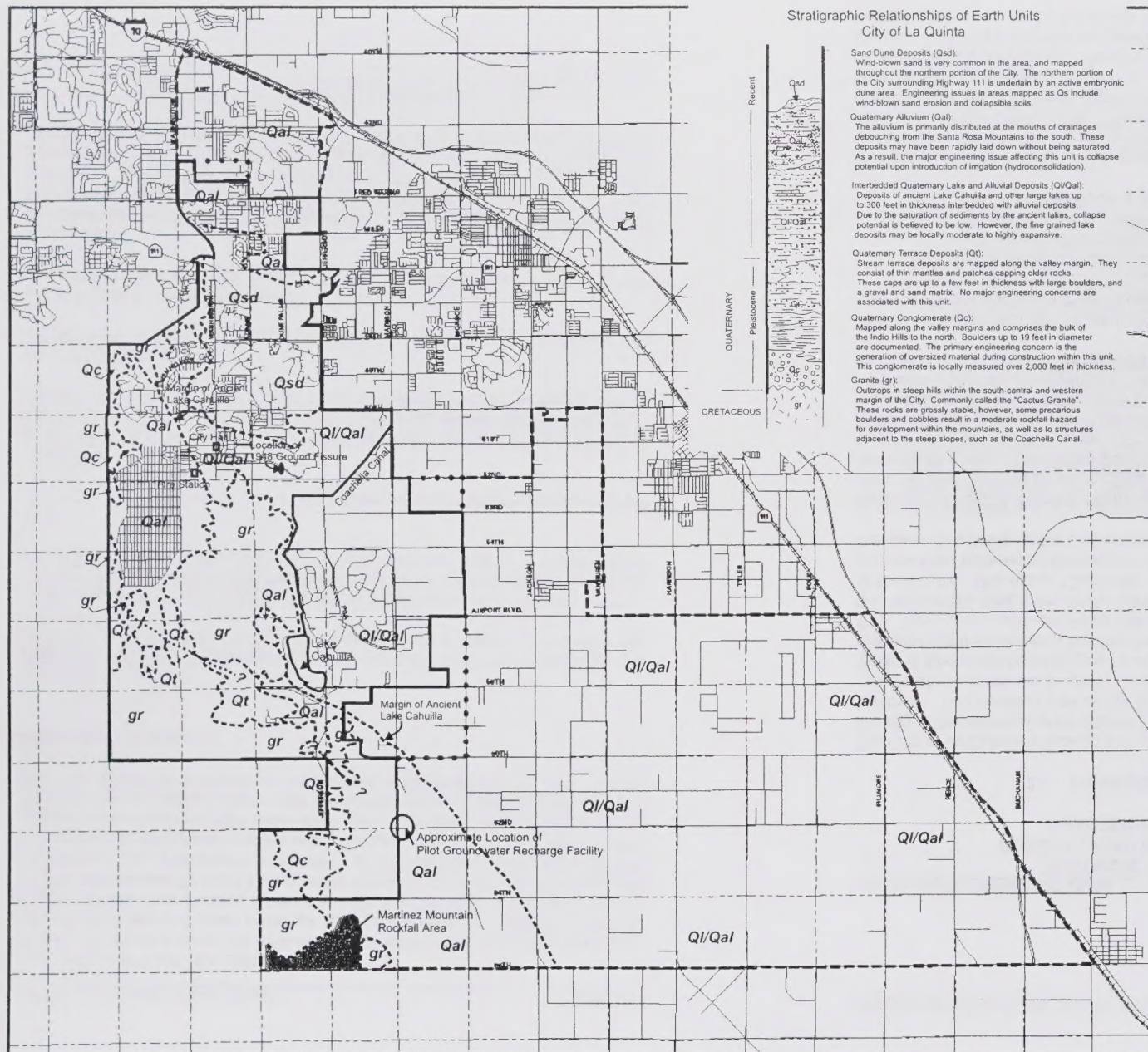
The City of La Quinta is located within a broad structural depression known as the Salton Trough. The tectonics of the Salton Trough are described in detail in Chapter 1 - Seismic Hazards. The northern part of the Salton Trough, where the City of La Quinta and its sphere of influence are located, is referred to as the Coachella Valley. The Coachella Valley is a northwest-trending valley about 65 miles long and 400 square miles in area that extends from the eastern end of the San Geronio Pass to the northern shore of the Salton Sea. The valley is surrounded by three northwesterly trending mountain ranges: the Little San Bernardino Mountains to the north, and the San Jacinto and Santa Rosa mountains to the south. The upper Coachella Valley is drained by the Whitewater River, which becomes the Whitewater Stormwater Channel at the City of La Quinta. The channel drains the lower Coachella Valley and empties into the Salton Sea.

During the last $\pm 10,000$ years, the trough has been periodically inundated by water that has often ponded, forming lakes or inland seas. These lakes typically contain highly saline, mineral-rich water. The Salton Sea is the most recent of these lakes, it formed in 1905 as a result of a break in a levee in the Colorado River. A thick accumulation of sediment at the mouth of the Colorado River keeps the water in the Salton Sea from flowing out into the Gulf of California. Ancient Lake Cahuilla, whose paleo-shoreline transects the City of La Quinta, completely evaporated about 400 years ago when the Colorado River changed its course to flow directly into the Gulf of California.

The general plan area lies at the foothills of the Santa Rosa Mountains, and is primarily underlain by four different types of geologic deposits (Figure 2-1):

- 1) granitic basement rock associated with the mountains,
- 2) lake (lacustrine) deposits associated with former bodies of water that ponded in the lower Coachella Valley,
- 3) stream deposits (alluvium) shed off the mountains, and
- 4) blowing sand deposits (sand dunes)

The physiography of the valley is important in that it controls to a great extent several of the geotechnical hazards affecting the City of La Quinta and vicinity, notably, wind-blown-sand erosion and subsidence. The tectonic subsidence of the valley is responsible to a great extent for the rapid deposition of poorly consolidated alluvium with a high hydroconsolidation/collapse potential. Groundwater withdrawal (due to well pumping) in the Coachella Valley has also caused subsidence (settlement) that impacts the City of La Quinta. Some portions of the general plan area are protected from the geotechnical hazard of wind erosion by the Santa Rosa Mountains.



City of La Quinta General Plan (exhibit map)

LEGEND

- Roads
- Township/Range Sections
- Railroads
- City Limits
- General Plan Planning Area
- City Sphere of Influence

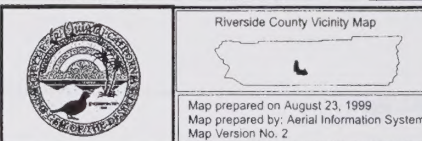
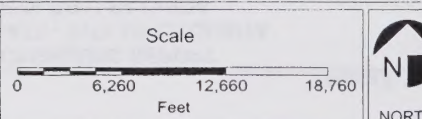
Figure 2-1: Geologic Map and Engineering Properties

Geotechnical Constraint Hazard	Physiography/Lithology	Earth Units Affected
Wind Erosion	Active Blowing Sand and Sand Dunes	Qsd
	Wind Erosion	Qal, Ql, Qt
Ground Failure	All Valley Areas	Qal, Ql, Qsd
Expansive Soils	Fine Grained Sediments with Shrink and Swell Characteristics	Ql
Collapsible Soils	Alluvium and Wind Deposits	Qal, Qsd
Rockfall Hazard	Steep Terrain	gr

bedrock fault, dotted where buried
queried where uncertain

The geology illustrated herein is based upon regional mapping and should not substitute for site-specific evaluation.

Prepared by: Earth Consultants International for
Terra Nova Planning & Research, Inc.



2.2 Earth Units/Engineering Properties

The stratigraphic relationships of the earth units that underlie the City of La Quinta and its sphere of influence are illustrated on Figure 2-2, while their areal distribution is shown on Figure 2-1 (Geologic Map). Below is a discussion of the general lithology, distribution and engineering properties of the various earth units from oldest to youngest, that crop out in the general plan area.

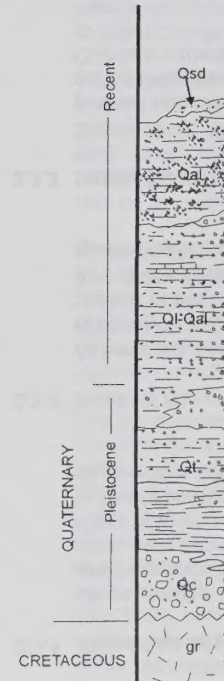
2.2.1 Granite (map symbol gr)

The Santa Rosa Mountains bordering the general plan area to the south are made of hard crystalline rock, consisting predominantly of granite that was emplaced more than 65 million years ago. This durable bedrock unit forms steep slopes, and typically weathers forming rounded boulders. These boulders often perch precariously on the slopes, and pose a rockfall hazard to areas adjacent to and downgradient from these slopes. Rockfalls can occur suddenly and without warning, but are more likely to occur during earthquake-induced ground shaking, periods of intense rainfall, or as a result of man's activities, such as road cutting. Mitigation of the rockfall hazard is best accomplished by avoiding development on the steep slopes and setting structures back from the toe of ascending slopes. In addition, the general northwesterly trending shear and fracture zones contained in these granites may lead to greater slope instability within northeasterly and southwesterly facing slopes. Detailed mapping of precarious rocks may facilitate avoidance of the hazard and help determine setbacks from ascending slopes. These rocks are typically non-water bearing except where extensively jointed and fractured. Accordingly, these materials have moderately low to low permeabilities, except where joints, shears and foliation provide avenues for water penetration. Unweathered rock cannot be excavated easily; blasting is typically required.

2.2.2 Quaternary Conglomerate (map symbol Qc)

The distribution and thickness of this unit (> 2,000 feet) is testament to the geologically rapid rates of subsidence and deposition in the Salton Trough during the last about 2 million years. This unit is exposed at the surface primarily along the margins of the Coachella Valley, and plays a significant role in the distribution and productivity of the area's underground aquifers. Because boulders exceeding 10 feet in diameter are known to occur in this unit, the primary engineering concern is the generation of oversized materials when grading in this unit.

Figure 2-2
Stratigraphic Relationships of Earth Units*
City of La Quinta



Sand Dune Deposits (Qsd):

Wind-blown sand is very common in the area, and mapped throughout the northern portion of the City. The northern portion of the City surrounding Highway 111 is underlain by an active embryonic dune area. Engineering issues in areas mapped as Qs include wind-blown sand erosion and collapsible soils.

Quaternary Alluvium (Qal):

The alluvium is primarily distributed at the mouths of drainages debouching from the Santa Rosa Mountains to the south. These deposits may have been rapidly laid down without being saturated. As a result, the major engineering issue affecting this unit is collapse potential upon introduction of irrigation water (hydroconsolidation).

Interbedded Quaternary Lake and Alluvial Deposits (Ql/Qal):

Deposits of ancient Lake Cahulla and other large lakes. Sediments are up to 300 feet in thickness, and are interbedded with alluvial deposits. Due to the saturation of sediments by the ancient lakes, collapse potential is believed to be low. However, the fine grained lake deposits may be locally moderate to highly expansive.

Quaternary Terrace Deposits (Ql):

Stream terrace deposits are mapped along the valley margins. They consist of thin mantles and patches capping older rocks. These caps are up to a few feet in thickness and consist of large boulders, with a gravel and sand matrix. No major engineering concerns are associated with this unit.

Quaternary Conglomerate (Qc):

Mapped along the valley margins; comprises the bulk of the Indio Hills to the north. Boulders up to 19 feet in diameter are documented. The primary engineering concern is the generation of oversized material during construction within this unit. This conglomerate is locally over 2,000 feet thick.

Granite (gr):

Crops out in steep hills within the south-central and western margin of the City. These rocks are grossly stable, however, some precarious boulders and cobbles result in a moderate rockfall hazard for development within the mountains, as well as to structures adjacent to the steep slopes, such as the Coachella Canal.

2.2.3 Quaternary Terrace Deposits (map symbol Qt)

Relatively small outcrops of stream deposits are mapped on the margin of the small valleys underlying the City. The largest surface outcrop of this unit is immediately south of Lake Cahuilla, where it is extensively mined at a gravel pit. This unit consists primarily of thin mantles and patches rarely exceeding a few feet in thickness that cap older rocks. This unit may produce scattered oversized material and may be moderately susceptible to wind erosion.

2.2.4 Interbedded Quaternary Lake and Alluvial Deposits (map symbol Ql/Qal)

These deposits were deposited by ancient Lake Cahuilla and other large lakes that once inundated the Salton Trough as recently as 400 years ago. These lake or lacustrine deposits are up to 300 feet in thickness and are typically interbedded with alluvial (stream) deposits. Since these sediments were saturated when deposited in a low energy environment of deposition, the potential for them to collapse is considered low. However, the fine-grained lake deposits may be locally moderately to highly expansive, and thus subject to shrink and swell when dry and wetted, respectively.

2.2.5 Quaternary Alluvium (map symbol Qal)

The alluvium is primarily distributed at the mouths of drainages debouching from the Santa Rosa Mountains to the south. The older developed area of the City constructed in the lee of Eisenhower Mountain is built entirely on alluvium. These deposits may have been rapidly laid down, without being saturated. As a result, the major engineering issue affecting this unit is collapse potential upon introduction of irrigation water (hydroconsolidation). Because the high shoreline of ancient Lake Cahuilla was at about 58 feet above sea-level, it is likely that sediments deeper than this level were saturated by groundwater, with a resultant reduction in their collapse potential.

2.2.6 Sand Dune Deposits (map symbol Qsd)

Wind-blown sand is very common in the area, and mapped throughout the northern portion of the City. The northern portion of the City surrounding Highway 111 is underlain by an active embryonic dune area. Engineering issues in areas mapped as Qsd include wind-blown sand erosion and collapsible soils.

2.3 Geologic Hazards in the City of La Quinta

2.3.1 Slope Stability

Slope stability is dependent on many factors and their interrelationships. Rock type and pore water pressure are possibly the most important factors, followed by slope steepness due to natural or man-made undercutting. The granitic rock forming the City's hillside terrain are grossly stable. However, the steepness of the slopes result in locally precarious rocks that could fall as a result of earthquake ground shaking or intense rainfall.

2.3.2 Rockfall Hazard

Areas most susceptible to rockfall are located below steep, resistant outcrops of relatively well-cemented materials. Such materials underlie most of the hillside regions of the City of La Quinta. The rockfall hazard in the City is considered high for hillside development, as well as for development located adjacent to steeply ascending slopes.

2.3.3 Debris Flow Hazard

Debris flows, like rockfalls, occur rapidly and without warning. Typically, fine-grained sedimentary rocks are susceptible to mud-flows or debris flows, especially during exceptionally high rainfall periods. Because the hillsides of the City of La Quinta are underlain by granites, the debris flow hazard is expected to be low.

2.3.4 Collapsible Soils

Hydroconsolidation or soil collapse typically occurs in recently deposited, Holocene soils that were deposited in an arid or semi-arid environment. Soils prone to collapse are commonly associated with wind-laid sands and silts, and alluvial fan and mudflow sediments deposited during flash floods. The soils typically contain minute pores and voids. The soil particles may be partially supported by clay, silt, or carbonate bonds. When saturated, collapsible soils undergo a rearrangement of their grains and a loss of cementation, resulting in substantial and rapid settlement under relatively low loads. An increase in surface water infiltration, such as from irrigation, or a rise in the ground-water table, combined with the weight of a building or structure, can initiate rapid settlement and cause foundations and walls to crack. In addition, man-made fill may be loose and unconsolidated, with an open internal structure. When these soils become saturated, the water removes the cohesive (or cementing) material, causing consolidation.

The distribution of collapsible soils in the City of La Quinta is heavily controlled by the margin of ancient Lake Cahuilla (Figure 2-1). The predominantly silty soils deposited in a saturated condition on the ancient lake floor are typically not susceptible to collapse. However, the alluvial fan deposits shed off the Santa Rosa Mountains to the south, and the blowing sands deposited in the northern portion of the City are vulnerable to collapse and hydroconsolidation. Typically, differential settlement of structures occurs when lawns or plantings are heavily irrigated in close proximity to the structure's foundation. Forensic indications of collapsible soils include:

- Tilting floors
- Cracking or separation in the structure
- Sagging floors
- Non-functional windows/doors

Sampling and laboratory testing for collapsible soils should be required in these high-risk zones. Collapse potential may be mitigated by removal and recompaction under optimum moisture conditions, pre-saturation of foundation soils, and improvements to post development site drainage. Special attention to avoid saturation of foundation soils after construction should include positive drainage away from the foundation, and planters with open bottoms should be avoided in areas adjacent to foundations.

2.3.5 Expansive Soils

Expansive soils are soils with a significant amount of clay particles that have the ability to give up water (shrink) or take on water (swell). When these soils swell, the change in volume exerts significant pressures on loads (such as buildings) that are placed on them. In the La Quinta area, expansive soils are considered a hazard because of the relatively significant amounts of clay present in the lacustrine deposits of ancient Lake Cahuilla and other large lakes that once inundated the lower Coachella Valley. Expansion testing and mitigation are required by the City's grading and building codes. Special engineering designs include the use of reinforcing steel in foundations, drainage control devices, over-excavation and backfilling with non-expansive soils, etc. Active enforcement, peer review and homeowner's involvement are required to maintain these standards. Homeowners should be informed and educated about the importance of maintaining a constant level of moisture below their foundation. Excessive watering or allowing expansive soils to become too dry both have negative consequences. Excessive swelling and shrinkage cycles can result in distress to improvements and structures.

2.3.6 Ground Subsidence

Ground subsidence is the gradual settling or sinking of the ground surface with little or no horizontal movement. In the areas of southern California where ground subsidence has been reported, this phenomenon is usually associated with the extraction of oil, gas or groundwater from below the ground surface, or the organic decomposition of peat deposits, with a resultant loss in volume. Ground subsidence can also occur as a response to natural forces such as earthquake movements, and the folding and subsiding activity of sedimentary basins. Earthquakes have caused abrupt elevation changes in excess of one foot across faults. Ground surface effects related to regional subsidence are generally restricted to structures sensitive to slight changes in elevations, such as canals, sewers, and drainages.

The Coachella Valley is filled with more than 10,000 feet of sediments, with the upper 2,000 feet defined as water-bearing deposits. The most important source of ground-water recharge to the lower Coachella Valley is the Colorado River, rather than runoff from the surrounding mountains (Tyley, 1974). Minor sources of recharge are groundwater inflow from adjacent areas, infiltration of precipitation that falls on the valley floor, and local runoff from the mountains that border the area.

Ground fissures were observed in the City of La Quinta in 1948 (Figure 2-1). Therefore, regional subsidence related to groundwater withdrawal is believed to have occurred in the Coachella Valley. The 1948 fissuring occurred during a period of rapid ground-water withdrawal (Figure 2-3). In 1996 the U.S. Geological Survey (Ikehara and others, 1997) established a precise geodetic network to monitor land subsidence in the lower Coachella Valley.

The groundwater basin in the Coachella Valley is currently in a state of overdraft. Groundwater levels in the La Quinta area are declining at an increasing rate as a result of valley-wide mining for groundwater. Water-level declines of as much as 50 feet occurred between the early 1920's and the late 1940's before water from the Colorado River was imported through the Coachella Canal in 1949. When surface water was introduced, pumping of groundwater decreased, and water levels recovered throughout most of the valley from the 1950's to the 1970's. Some of the basin recharge was attributed to the leakage from unlined water canals. Since the late 1970's, however, the demand for water has exceeded the deliveries of imported surface water, and groundwater levels have been declining again as a result of increased pumping. Groundwater levels in 1996 were in many areas lower than the historical low groundwater levels. These observed declines in water level have the potential to induce new or renewed land subsidence in the area affecting the City of La Quinta (Ikehara and others, 1997).

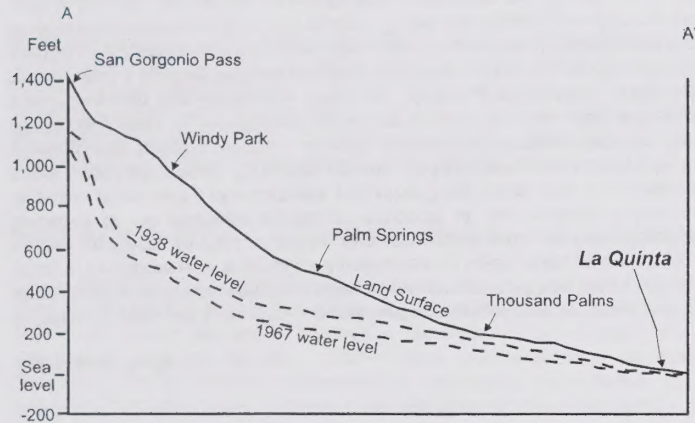


Figure 2-3: Cross-section showing ground-water levels for the upper Coachella Valley area from 1938 to 1967. The water-level profile for 1967 shows that water levels declined in most places in the valley. The lowered water-level resulted from increased withdrawals within the Whitewater River subbasin. Water levels for 1967 were about the same as those for 1938 in the extreme southern part of the upper valley, at about the region of the City of La Quinta, as a result of leakage from the Coachella Canal beginning in 1949.

Recent studies by the USGS have determined that long term declines in water levels of sufficient magnitude to induce land subsidence have occurred in portions of the Coachella Valley. In 1996, a precise elevation network to monitor land subsidence in the lower Coachella Valley was established. Study results indicate that subsidence at network monument locations has occurred in varying degrees. Fourteen of the seventeen location (15 of which have historical elevation data) indicate cumulative subsidence measurements ranging from -0.2 to -0.5 feet since the 1930's. Where data were available, historical subsidence was plotted over time and compared to water-level changes in nearby wells. In general, subsidence occurred during periods of water-level decline, and rebound occurred during intervening periods of water level recovery. Since the magnitude of these subsidence determinations is near or within the range of uncertainty (± 0.2 feet) for measurements made under these conditions, these measurements do not unequivocally indicate that subsidence has occurred. However, since the timing of the subsidence measurements corresponds with water level declines, land

subsidence is probably occurring, and a significant part of the measured subsidence likely has occurred since 1991, about the time when water levels began declining below their previously recorded low levels (Steve Robbins, personal communication, 1999).

Land subsidence can result in the disruption of surface drainage, reduction of aquifer system storage, the formation of earth fissures, and damage to wells, buildings, roads and utility infrastructure. Although it is not readily determinable why the 1948 ground fissure manifested itself near the location of Avenue 52 and Adams Street, the region is in close proximity to the margin of the Coachella Valley with the Santa Rosa Mountains. While subsidence typically occurs throughout an overdrafted valley, differential displacement and fissures are manifested at or near the valley margin. Therefore, damage to structures as a result of regional subsidence would be expected to be greatest at the valley margin and because the City of La Quinta is built at the margin of the Coachella Valley, future ground fissures have the potential to occur throughout much of the City. Based on a 1948 photograph presented in Ikehara and others (1997), observed for this study, the fissure appears to be over 20 feet in length and more than one-foot across at its widest location. Therefore, a reoccurrence of this or similar ground fissures would clearly result in damage to any structures that are built in the effected area.

Mitigation of subsidence will require a regional approach to groundwater conservation and recharge. These mitigation measures are expected to be difficult to implement. Conservation efforts will be more than offset by the rapid growth of the region and the heavy water requirements of golf courses (± 8 acre-feet per acre per year). Because overdraft of the Coachella Valley groundwater basin is caused by all water users in the area, and it does not appear feasible to determine where the ground fissures might manifest themselves, a potential mitigation measure may be to fund structural repairs or replacement with costs passed on to water users through the Coachella Valley Water District.

Currently, groundwater recharge in the La Quinta area is minimal. The Coachella Valley Water District operates a pilot recharge facility south of Lake Cahuilla near Avenue 62 and Madison Street (Figure 2-1). The facility has been in operation since 1996 and has shown that recharge at this location is feasible (Steve Robbins, personal communication, 1999). Design of a full scale facility at this location will likely begin within the next several years.

The U.S. Geological Survey (Ikehara and others, 1997) plans to make precise elevation measurements every 2-3 years to determine the magnitude and extent of subsidence. In addition, monitoring of water levels in wells is required to assess the potential relationship between groundwater overdraft and regional subsidence.

2.3.7 Wind-Blown Sand

Wind erosion is a serious environmental problem attracting the attention of many across the globe. It is a common phenomenon occurring mostly in flat, bare areas; dry, sandy soils; or anywhere the soil is loose, dry, and finely granulated. Wind erosion damages land and natural vegetation by removing soil from one place and depositing it in another. It causes soil loss, dryness and deterioration of soil structure, nutrient and productivity losses, air pollution, and sediment transport and deposition.

Soil movement is initiated as a result of wind forces exerted against the surface of the ground. For each specific soil type and surface condition there is a minimum velocity required to move soil particles. This is called the threshold velocity. Once this velocity is reached, the quantity of soil moved is dependent upon the particle size, the cloddiness of particles, and wind velocity itself. Suspension, saltation, and surface creep are the three types of soil movement which occur during wind erosion (Figure 2-4). While soil can be blown away at virtually any height, the majority (over 93%) of soil movement takes place at or below one meter.

The presence of dust particles in the air is the source of several major health problems. Atmospheric dust causes respiratory discomfort, may carry pathogens that cause eye infections and skin disorders, and reduces highway and air - traffic visibility. Dust storms can cause additional problems as well. Buildings, fences, roads, crops, trees and shrubs can all be damaged by abrasive blowing soil.

Wind and wind-blown sand is an environmentally limiting factor throughout the Coachella Valley, including the City of La Quinta. Wind-blown sand is a well recognized hazard for developments in the La Quinta region; it has forced abandonment of dwellings and subdivided tracts in the central Coachella Valley (Sharp, 1980). Utility poles in the area are frequently armored with sheet metal around the base to help reduce wind erosion. The Coachella Valley area, in which the City lies, is undergoing rapid development and changes in land use that have led to increases in wind-blown sand. High winds often blow down the axis of the Coachella Valley and shelter from these high winds controlled the location of initial development in the upper Coachella Valley. Most of the early development of the winter recreational resort communities were located in the lee of the protecting mountains, such as Palm Springs. Much of the early development in the City of La Quinta was located in the small alluvial valley in the lee of Eisenhower Mountain. Development has now moved into the central axis of the valley and into the high-wind areas. As a result, communities like the City of La Quinta need to rely on other mitigation measures.

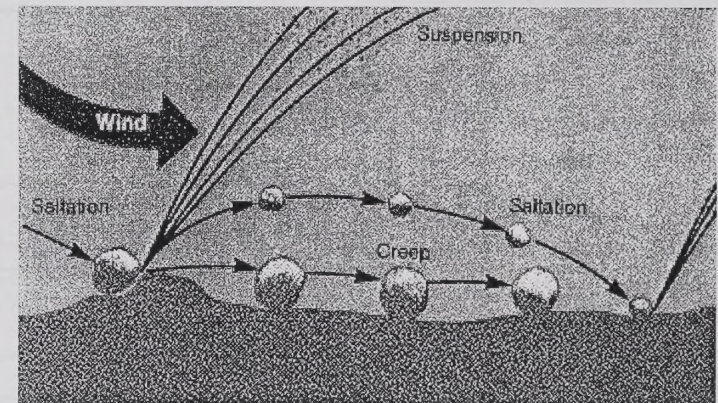


Figure 2-4: Wind-induced soil movement is initiated as a result of wind forces exerted against the surface of the ground and particles move by suspension, saltation, and surface creep. Soil can be blown high into the atmosphere, however, most soil movement takes place within one meter (3 feet) of the ground surface.

The primary source of sand in the La Quinta area is the Whitewater River; in fact, increases in the amount of wind-blown sand are related to episodic flooding of the Whitewater River (Sharp, 1964, 1980). Therefore, mitigation of wind-blown sand is directly related to mitigation of flood potential on the Whitewater River. Sample plots positioned by Caltech investigators near Garnet Hill, about ten miles northwest of La Quinta, consisted of 2 to 3-inch thick lucite rods, common bricks, hard crystalline rock, and gypsum-cement cubes. As a result of wind erosion, one lucite rod was severed, and many samples were eroded up to several centimeters per year. A 15-fold increase in wind erosion rates was noted following heavy flood events (Sharp, 1980). These flood events changed the character of the Whitewater River drainage from a stony aspect to a sandy appearance. Typically, within a few months of the flooding event, the drainage bottom returned to a predominantly stony appearance. The observation that mitigation of wind-blown sand erosion is related to reduction of flood potential of the Whitewater River is extremely important for the City of La Quinta. Efforts to control the wind using hedges and other barriers may not be entirely effective in mitigating wind erosion.

According to El-Aghel (1984), five physical factors determine the distribution and intensity of the wind-blown sand hazard in the Coachella Valley:

- 1) Orientation of hill and mountain masses: The major mountain masses bordering the valley have their long axes aligned in a northwest-southeast direction. As a result, these mountains offer little resistance to the free flow of air down the long axis of the Coachella Valley. The narrow San Geronio Pass accelerates the wind and improves its ability to pick-up and transport sand.
- 2) Nature of the bedrock: The granitic and metamorphic rocks that comprise the local mountains readily weather to grain size categories that are easily transported by wind.
- 3) Location of the Whitewater River floodplain: The Whitewater River is the main stream feeding the upper Coachella Valley. It drains much of the adjacent parts of the San Bernardino Mountains. During flood events, large quantities of sand and gravel are deposited on the Whitewater floodplain. The floodplain is located at the eastern end of San Geronio Pass, precisely where wind velocities are the greatest.
- 4) Slope of the valley floor: From the summit of the San Geronio Pass, at an elevation of about 1,200 feet, to the Salton Sea, which is at an elevation of below sea-level, the valley floor slopes without interruption. This allows air to move unhindered down the long axis of the Coachella Valley.
- 5) Climate: The Coachella Valley is a hot dry desert with sparse, widely spaced vegetation. As a result, surficial materials are exposed to wind activity. The precipitation in the adjacent mountains is often short and intense, leading to torrential run-off and considerable detritus deposition on the valley floor.

Man has exasperated these physical conditions by removing native vegetation, and building roads and other types of infrastructure across the valley floor. Recreational land uses, especially use of off-road vehicles, accelerates erosion in the area. Because of these conditions, there is considerable wind-blown sand erosion throughout the valley and much of the City of La Quinta. However, the region of greatest blow-sand activity is located in the central valley, in a region that stretches from Palm Springs to the northern portion of the City of La Quinta. Figure 2-5 illustrates the wind hazard severity zones for the City of La Quinta.

As mentioned, the most effective mitigation of the blow-sand hazard is by mitigating the primary source of sand in the Coachella Valley – periodic flooding of the Whitewater River. Mitigation of this would require a multi-million dollar upstream

dam and maintenance to remove trapped sediment. Lining the Whitewater River channel would reduce the sand supply, but reduce the favorable aspects of groundwater infiltration. While building and maintaining a dam may be economically justifiable based on the continued wind-blown sand damage throughout the valley, it is more likely that local, smaller scale mitigation measures will continue to be implemented.

City of La Quinta General Plan (exhibit map)

LEGEND

- Roads
- - - Township/Range Sections
- +— Railroads
- City Limits
- - - General Plan Planning Area
- ... City Sphere of Influence

**Figure 2-5
Wind Hazard Map**

EXTREME: Very severe wind erosion hazard - areas exposed to erosive winds where soils show distinct evidence of wind accumulation, and areas exposed to erosive winds where soils highly to extremely erodible by wind have been mapped.

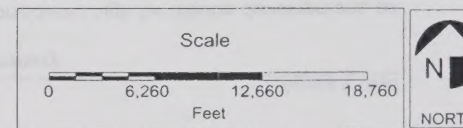
SEVERE: Severe wind erosion hazard - areas exposed to erosive winds where soils showing distinct evidence of wind accumulation have not been mapped, but where soils moderately to highly erodible by wind have been mapped.

MODERATE: Moderate wind erosion hazard - areas partially protected from erosive winds and areas where fine-grained soils only slightly erodible by wind have been mapped.

SLIGHT: Slight wind erosion hazard - bedrock areas and areas partially to fully protected from erosive winds where the soils are coarse-grained and show little evidence of soil removal or accumulation.

Sources:
Knecht, Arnold A., 1980, Soil Survey of Riverside County, California, Coachella Valley Area: United States Department of Agriculture, Soil Conservation Service, in Cooperation with the University of California Agricultural Experiment Station, 89p. plus 19 map sheets.
Brooks, Frank L., 1967, Progress Report on the Coachella Valley Wind Erosion Problems: United States Department of Agriculture, Soil Conservation Service, prepared at the request of the Coachella Valley Soil Conservation District, 32p.

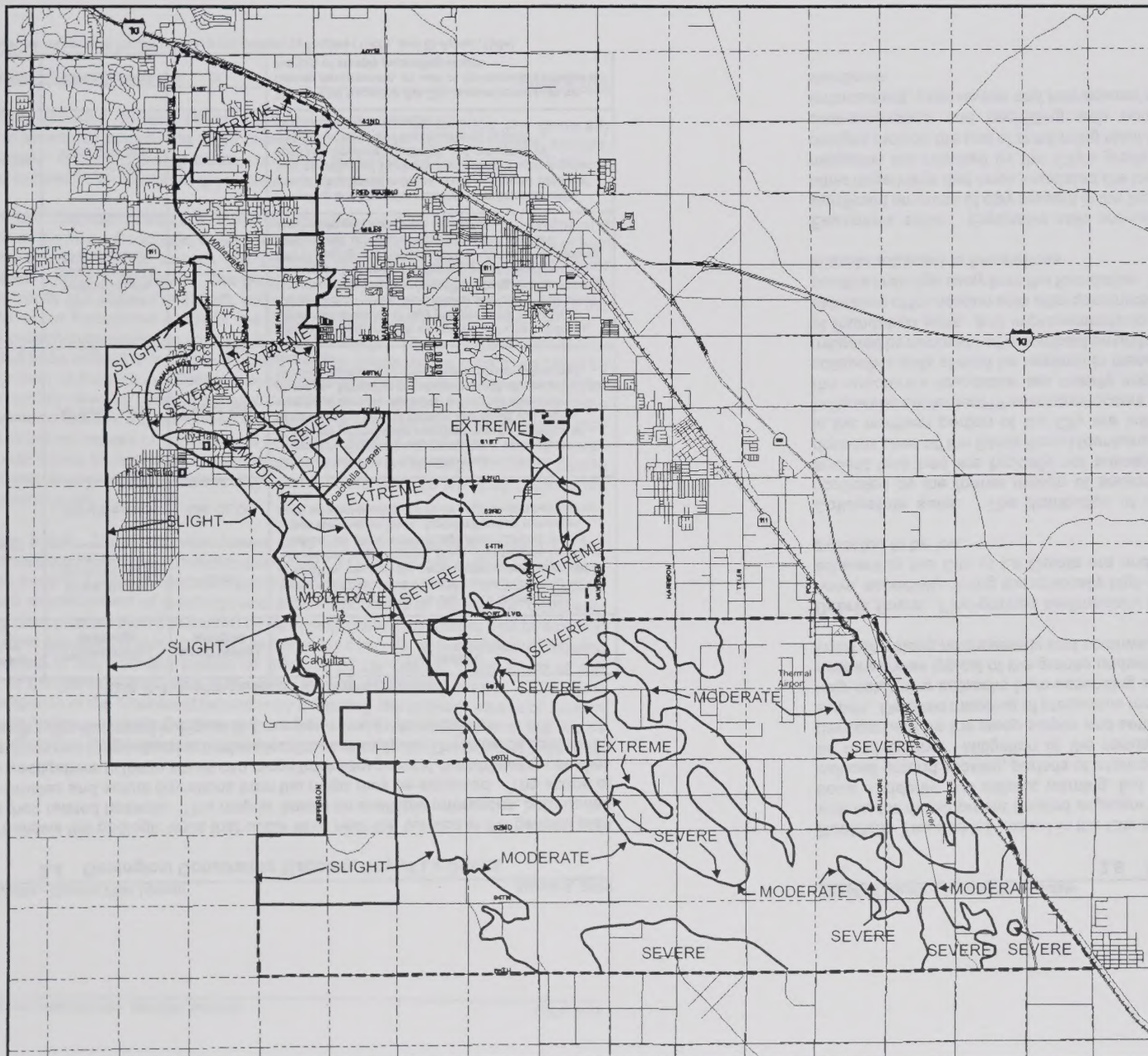
Prepared by: Earth Consultants International for
Terra Nova Planning & Research, Inc.



Riverside County Vicinity Map



Map prepared on July 10, 2000
Map prepared by: Aerial Information Systems
Map Version No. 6



2.4 Geological Constraints Mapping, City of La Quinta

Figure 2-1 shows the geologic units that occur at or near the surface in the general plan area, and their related hazards. This map is based on available references, boundaries are approximates and actual deviations from the maps may be expected. The scope of required investigations in these zones can range from very general, feasibility-type studies to investigations requiring extensive field exploration and analysis. The hazards associated with the earth units illustrated in Figure 2-1 are described in detail below:

Table 2-1: Geologic Hazards Map Summary*

Geotechnical Constraint/Hazard	Physiography/Lithology	Earth Unit(s) Affected	Discussion
Wind Erosion	Active Blowing Sand and Sand Dunes	Qsd	The northern portion of the City of La Quinta along Highway 111 is within the active zone of blowing sand. In addition, much of the general plan area is exposed to a lower risk "wind-erosion" zone. The primary source of sand can be eliminated through flood controls on the upper Whitewater River. Local mitigation measures, such as wind-breaks and re-vegetation can have some effect.
	Wind Erosion	Qal, Ql, Qt	
Ground Failure	All Valley Areas	Qal, Ql, Qsd	Areas susceptible to liquefaction are described in Chapter 1. Regional subsidence as a result of continued groundwater overdraft may be manifest as fissures at the ground surface and affect vulnerable structures such as canals as a result of elevation changes. Mitigation of subsidence will require a regional approach of groundwater conservation and recharge.
Expansive Soils	Fine Grained Sediments with Shrink and Swell Characteristics	Ql	Expansive soils may be associated with the relatively significant amounts of clay present in the lacustrine deposits of ancient Lake Cahuilla and other large lakes that once inundated the lower Coachella Valley. Expansion testing and mitigation are required by the City's grading and building codes. Active enforcement, peer review, and homeowners maintenance are required to maintain these standards.
Collapsible Soils	Alluvium and Wind Deposits	Qal, Qs	Sampling and laboratory testing for collapsible soils should be required in these areas. Collapse potential may be mitigated by removal and recompaction under optimum moisture conditions, pre-saturation of foundation soils, and improvements to post development site drainage.
Rockfall Hazard	Steep Terrain	gr	The rockfall hazard in the City is considered high for hillside development, as well as development located at the foot of steeply ascending slopes.

*: Based on regional mapping of Proctor (1968), a compilation by Rogers (1965), and El-Aghel (1984).

2.5 Summary

Rockfall: The rockfall hazard in the City is considered high for hillside development, as well as for development located adjacent to steeply ascending slopes. Rockfalls can occur suddenly and without warning, but are more likely to occur during earthquake-induced ground shaking, periods of intense rainfall, or as a result of man's activities, such as road cutting. Mitigation of the rockfall hazard is best accomplished by avoiding development on the steep slopes and setting structures back from the toe of ascending slopes. Detailed mapping of precarious rocks may facilitate avoidance of the hazard and help determine setbacks from ascending slopes. The northwesterly trending shear and fracture zones typical of the granite underlying the study area may lead to greater slope instability along northeasterly and southwesterly facing slopes.

Debris flows: Fine-grained sedimentary rocks are susceptible to mud-flows or debris flows, especially during exceptionally high-rainfall periods. Because the hillsides in and adjacent to the City of La Quinta are underlain by granites, the debris flow hazard is expected to be low.

Collapsible soils: The distribution of collapsible soils in the general plan area is controlled by the former margin of ancient Lake Cahuilla. The soils deposited in the ancient lake bed are typically not susceptible to collapse. However, the alluvial fan deposits shed off the Santa Rosa Mountains to the south, and the blowing sands deposited in the northern portion of the City are vulnerable to collapse and hydroconsolidation. Differential settlement of structures occurs when lawns or plantings in close proximity to the structure's foundation are heavily irrigated. Sampling and laboratory testing for collapsible soils should be required in these high-risk zones. Collapse potential may be mitigated by removal and recompaction under optimum moisture conditions, pre-saturation of foundation soils, and improvements to post development site drainage. To avoid saturation of foundation soils after construction special attention should be given to provide positive drainage away from the foundation. Planters with open bottoms should be avoided in areas adjacent to foundations.

Expansive soils: Expansive soils are considered a hazard because of the relatively significant amounts of clay present in the lacustrine deposits of ancient Lake Cahuilla and other large lakes that once inundated the lower Coachella Valley. Expansion testing and mitigation are required by the City's grading and building codes. Special engineering designs include the use of reinforcing steel in foundations, drainage control devices, and over-excavation and backfilling with non-expansive soils, among others. Active enforcement, peer review and homeowner's involvement are required to maintain these standards.

Subsidence: Ground surface effects related to regional subsidence are generally restricted to structures sensitive to slight changes in elevations, such as canals, sewers, and drainages. Ground fissuring was documented in the City of La Quinta in 1948 and is believed to have been related to groundwater withdrawal.

In 1996, the U.S. Geological Survey established a precise geodetic network to monitor land subsidence in the lower Coachella Valley. These data, combined with monitoring of well water-levels are required to assess the potential relationship between groundwater overdraft and regional subsidence. The ground-water aquifer throughout the Coachella Valley is currently in a state of overdraft, and as a result, future ground fissures have the potential to occur throughout much of the City. Subsidence mitigation will require a regional approach to groundwater conservation and recharge. These mitigation measures are expected to be difficult to implement. Conservation efforts will be more than offset by the rapid growth of the region. Because overdraft of the Coachella Valley groundwater basin is caused by all water users in the area, and it does not appear feasible to determine where the ground fissures might manifest themselves, a potential mitigation measure may be to fund structural repairs or replacement with costs passed on to water users through the Coachella Valley Water District. Currently, groundwater recharge in the La Quinta area is minimal. Design of a full scale facility south of Lake Cahuilla will likely begin within the next several years.

Wind-blown sand: Wind and wind-blown sand are environmentally limiting factors throughout the Coachella Valley, including the City of La Quinta and its sphere of influence. Wind-blown sand is a well recognized hazard for developments in the La Quinta region; it has forced abandonment of dwellings and subdivided tracts in the central Coachella Valley. Man has exasperated this hazard by removing native vegetation, and by building roads and other types of infrastructure across the valley floor. An active system of blowing sand is located in the northern portion of the City of La Quinta, while much of the remainder of the general plan area is exposed to a lower severity zones. The most effective mitigation of the blow-sand hazard is by mitigating the primary source of sand in the Coachella Valley – periodic flooding of the Whitewater River. Mitigation of this would require a multi-million dollar upstream dam and maintenance to remove trapped sediment.

**TECHNICAL BACKGROUND REPORT
GENERAL PLAN UPDATE - CITY OF LA QUINTA
CHAPTER 3: FLOOD HAZARDS**

State of California Government Code Section 65302 (g) requires local governments to assess the potential impact that flooding, and failure of dams or other water retention structures, might have on their jurisdiction. This chapter reviews published flood inundation maps and a directory of dams showing inundation limits. Safety Elements of General Plans must also assess the impact of flooding from storm activity such as a 100-year flood event. A 100-year flood event is a flood that has a 1/100 chance of occurring in any one year, and a 26% chance of occurring during a typical 30 year home mortgage. Smaller-scale flooding generally associated with overburdened storm drain and canal systems can damage property and hinder emergency activities such as fire department access or evacuation. Consequently, the potential for more frequently occurring, small-scale flooding is also assessed in this report.

The City of La Quinta and its sphere of influence are vulnerable to flooding associated with the Whitewater River, and Bear Creek drainages, as well as along many of the alluvial fans that descend from the City's hillsides. A multi-hazard mitigation opportunity exists for the City of La Quinta and surrounding communities, in that control of flooding on the Whitewater River will substantially reduce the sand supply and subsequent wind-blown sand erosion and deposition hazard for the area described in Chapter 2. Large-scale developments in the Coachella Valley have utilized golf courses and greenbelts as part of a network of channels that collect flood flows on the upstream side of a project, carry it safely through the project, and disperse it on the downstream side. However, given the low permeability of the bedrock underlying the surrounding hills and mountains in the general plan area, heavy runoff from these areas during strong storms cannot be prevented.

Bridge foundations are vulnerable to scouring during a flood event. As a result, major north-south crossings of the Whitewater River (such as Jefferson and Washington streets) are vital to the City of La Quinta and should be designed accordingly.

No dam failure inundation paths impact the City of La Quinta, however, failure of the Coachella Canal or Lake Cahuilla levee systems could result in local flooding. These levees may be vulnerable to liquefaction or lateral spreading. Liquefaction and lateral spreading damaged Imperial Valley canals during earthquakes in 1979 and 1987.

The susceptibility to tsunami inundation in the event of an earthquake is considered nil. However, local flooding as a result of seicheing of enclosed bodies of water, or failure of water tanks may occur in an earthquake.

3.1 Stream Flooding

The most widely distributed flood map product is the Flood Insurance Rate Map (FIRM). Flood risk data presented on FIRMs are based on historic, meteorologic, hydrologic, and hydraulic data, as well as open-space conditions, flood control works and development. To prepare FIRMs that illustrate the extent of flood hazards in a flood-prone community, the Federal Emergency Management Agency (FEMA) conducts engineering studies referred to as Flood Insurance Studies (FISs). Using information gathered in these studies, FEMA engineers and cartographers delineate Special Flood Hazard Areas (SFHAs) on FIRMs. SFHAs are those areas subject to inundation by a flood that has a 1-percent or greater chance of being equaled or exceeded during any given year. This type of flood is referred to as a base or 100-year flood. A base flood has a 26-percent chance of occurring during a 30-year period, generally the length of most home mortgages. However, the recurrence interval represents the long-term average period between floods of a specific magnitude; rare floods could occur at short intervals or even within the same year. The base flood is a regulatory standard used by Federal agencies and most states, to administer floodplain management programs, and is also used by the National Flood Insurance Program (NFIP) as the basis for insurance requirements nationwide.

Flood hazards are normally associated with large amounts of precipitation or snow melt that cause floods, landslides, and debris flows. The floods throughout the State of California in 1993 and 1995 have caused an increased awareness of the potential for personal and structural losses and damages, particularly in the highly urbanized parts of flood plains and alluvial fans in California, and in the City of La Quinta. Areas of newer development that are upslope from older urban areas have caused increased runoff and new flooding problems in the older developed areas. The need for improved flood conveyance structures and levee designs that would reduce potential flood hazards has resulted in hydrologic studies that focus on collection and analysis of precipitation and flood data. Rainfall-runoff and hydraulic models are utilized by the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map program to analyze flood potential, adequacy of flood protective measures, surface- and ground-water interchange characteristics, and the variable efficiency of mobile (sand bed) flood channels.

The City of La Quinta participates in the National Flood Insurance Program. Consequently, Flood Insurance Rate Maps (FIRMs) prepared by FEMA (revised August 19, 1991) showing potential flood zones are available for areas within City limits. The Whitewater River, La Quinta Evacuation Channel and Bear Creek areas within the City all have floodplain zoning to restrict development of flood hazard areas. The FEMA maps currently available for the City include Community Panels 060709-0010-B and 060709-0005-B, dated August 19, 1991. These maps were used to provide the general boundaries of the 100-year and 500-year flood inundation area shown on Figure 3-1. Maps and flood elevations are amended periodically to reflect future changes.

City of La Quinta General Plan (exhibit map)

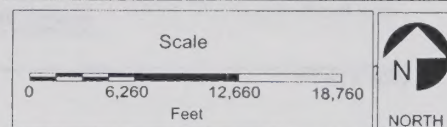
LEGEND

- Roads
- - - Township/Range Sections
- + + + Railroads
- City Limits
- - - General Plan Planning Area
- ... City Sphere of Influence

Figure 3-1
Flood Hazard Map

-  Area projected to be inundated by a 100 year flood event
-  Boundary of area projected to be inundated by a 500 year flood event

Mapping based on Federal Emergency Management Agency (FEMA), 1991, Flood Insurance Rate Maps for the City of La Quinta, Community Panels 060709-0005-B, and 060709-0010-B.



Riverside County Vicinity Map



Map prepared on July 10, 2000
Map prepared by: Aerial Information Systems
Map Version No. 6

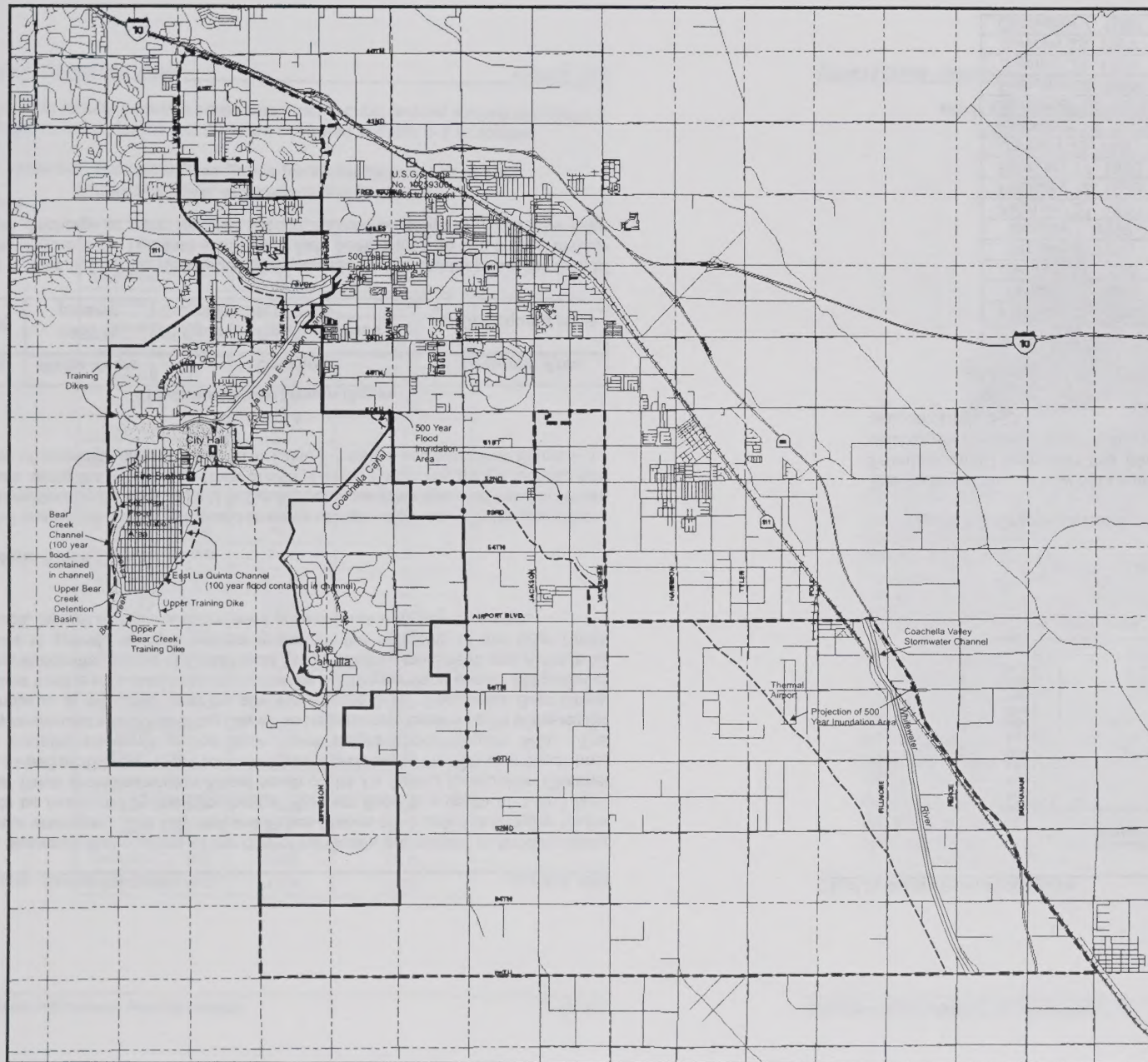


Figure 3-1 illustrates that portions of the City of La Quinta are subject to flooding along several major drainages. The City Hall and Police Station are located in a region that is projected to be inundated by the hypothetical 100-year flood to a depth of 1 to 3 feet. Eisenhower Drive and Washington Street south of the La Quinta Evacuation Channel crossings, as well as Avenue 52, are projected to be inundated by the 100-year flood, thus, potentially trapping residents of the Bear Creek neighborhood (Figure 3-1). The emergency response capabilities of the City's Fire Department, located south of the region where inundation is projected, may be affected (Figure 3-1). The entire Bear Creek neighborhood itself is projected to be inundated by a 500-year flood event. Mitigation of the potential evacuation routes of Eisenhower Drive, Washington Street, and Avenue 52 is necessary to provide multiple escape routes for the residents of the Bear Creek neighborhood, as well as ingress and egress access for emergency response.

3.1.1 Historic Flood Flows

Flood waters have been computed to move at high velocities, with the potential to do considerable damage. The U.S. Geological Survey has operated several stream gages along the Whitewater River drainage since 1966. The gauge location and years of operation are summarized in Table 3-1 below and shown on Figure 3-1:

Table 3-1
Whitewater River Stream Gages

Gage No.	Water Years	Location	Drainage Area
10259300	1966 to present	At Southern Pacific Railroad Crossing, City of Indio	1,073 square miles

The historic flow of the Whitewater River is well represented for about the last 30 years (Figure 3-2). The data available include peak discharge and graphs of daily mean discharge in cubic feet per second, as well as stage in feet above gage datum.

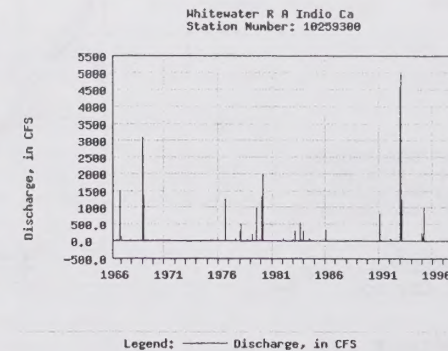


Figure 3-2: Graph of Historical Streamflow Daily Discharge Mean

The historical stream flow data indicate that peak flows typical occur in January, February, and March, and that there are at least 15 days on record when the discharge exceeded a mean value for the day of greater than 1,000 cubic feet per second (Table 3-2).

Table 3-2: Daily Mean Discharge Maximums

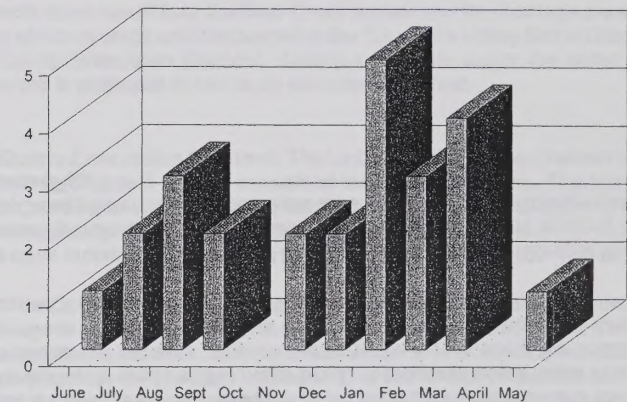
Date	Daily Mean Discharge (cfs)
February 20, 1993	1,200
January 17, 1993	3,000
January 16, 1993	5,000
January 8, 1993	4,600
January 7, 1993	3,000
February 21, 1980	1,980
February 18, 1980	1,120
February 17, 1980	1,960
January 29, 1980	1,300
September 11, 1976	1,250
September 10, 1976	1,000
February 25, 1969	1,350
January 26, 1969	1,160
January 25, 1969	3,080
December 7, 1966	1,500

Other data include peak discharge measured in cubic feet per second and stage in feet above datum for the last 30 years illustrated in Table 3-3 as follows:

**Table 3-3: Historical Peak Flows for Water Years 1966 to 1998
Whitewater River at Southern Pacific Railroad**

Date	Peak (cfs)	Stage (feet above datum)
September 26, 1997	34	7.40
February 1, 1996	0.57	7.15
March 6, 1995	2,210	8.83
March 19, 1994	10.0	7.28
March 1, 1991	2,300	3.70
January 4, 1989	3.90	1.69
August 24, 1988	152	2.29
February 15, 1986	1,350	3.17
July 22, 1984	1,090	3.01
August 17, 1983	1,600	3.32
February 11, 1982	458	2.67
November 11, 1980	27.0	2.18
January 29, 1980	6,100	4.12
July 20, 1979	8,570	12.55
January 15, 1978	2,140	9.24
August 17, 1977	377	7.91
September 10, 1976	8,300	12.40
December 29, 1974	21.0	6.97
May 9, 1972	31.0	7.05
March 6, 1971	194	7.23
January 27, 1970	8.00	7.10
January 25, 1969	11,400	14.41
June 8, 1968	38.0	6.65
December 7, 1966	4,960	11.36
November 22, 1965	14,100	15.30

Figure 3-3: Frequency of Peak Discharge per Month (1966 to 1998)



During the last 30 years, peak discharges have occurred more often in January, February and March than any other month (Figure 3-3), and future flooding can therefore be expected in the Winter. Flooding during the Winter months reflects the fact that large storms often occur in these months, which combined with snow melt from the local mountains, results in large peak discharges. There are only two events in the historic record where peak discharge was measured at greater than 10,000 cubic feet per second:

- January 25, 1969: 11,400 cfs
- November 22, 1965: 14,100 cfs

The flood of January 25, 1969 destroyed a Caltech wind-erosion study site in the Whitewater River drainage, washed out a section of road, and created a 9 to 10-foot high waterfall into a gravel pit that undercut a highway by headward erosion (Sharp, 1980). As shown in Table 3-3, however, there is significant variation in peak discharge, including ten water years in which peak flows were no greater than 100 cubic feet per second. Several peak readings were below 10 cfs, with an all time low peak of 0.57 cfs in February 1996 (Table 3-3).

3.1.2 Principal Flood Problems

The Federal Emergency Management Agency (FEMA) is mandated by the Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 to evaluate flood hazards and provide Flood Insurance Rate Maps (FIRM's) for local and regional planners to further promote sound land use and floodplain development. For the City of La Quinta, FEMA (1991) has updated a Flood Insurance Study (FIS). The FIS evaluates principal flood problems and flood protection measures for the City of La Quinta. These findings, as well as additional information from the Coachella Valley Water District, the U.S. Geological Survey and the Army Corp of Engineers, are summarized below.

According to the Flood Insurance Study for the City of La Quinta (FEMA, 1991), the potential flooding sources in La Quinta are Bear Creek and the Whitewater River. However, localized flooding associated with the alluvial fans descending from steep hillsides in the southern portion of the City may also be a potential flooding source for the City. Flood flows on alluvial fans often include unpredictable braiding and fanning.

While the mean annual precipitation on the floor of the Coachella Valley is low (4 inches), the potential for high and intense precipitation in the mountains surrounding the valley is substantial due to their great elevations, ranging to 11,485 feet at the summit of Mount San Geronio. The high precipitation in the mountains can have a significant impact on the valley floor many miles away.

Floods that impact the City of La Quinta are typically of short duration, high peak volumes and laden with large amounts of debris. This is due to the arid nature of the area; when a major storm moves in, water collects rapidly and runs off quickly due to the rapid descent of the mountains into the Coachella Valley. Consequently, resulting floods are of the flash-flood type, with sharp peaks and short durations. Floods also carry a large amount of debris due to the lack of vegetative cover and steepness of the mountains surrounding the valley.

Historical records for the area dating back to 1769 were reviewed by the Army Corp of Engineers (ACOE). ACOE determined that there were relatively large flood events in the Whitewater River basin in 1825, 1833, 1840, 1850, 1859, 1862, 1867, 1876, 1884, 1886, and 1891. More accurate records indicate that there were flood events in January 1916, December 1921, April 1926, February 1927, February 1937, March 1938, and December 1940. Most recently, substantial floods occurred in November 1965, December 1966, January 1969, February 1969, and September 1976. The greatest storm on record is attributed to the event in March of 1938 (FEMA, 1991), with a peak discharge estimated at 42,000 cubic feet per second (FEMA, 1996). The 1938 flood is almost twice the peak of the second highest

(November 22, 1965, 24,000 cfs). It appears from these data that a major flood occurs, on average, every ten years.

Floods that impact the La Quinta area can be attributed to three different types of storm events. The first are general winter storms that combine high-intensity rainfall and rapid melting of the mountain snowpack. The second type is due to tropical storms out of the southern Pacific Ocean, such as tropical storm Kathleen in September 1976, that caused \$15 million in damages to the cities of La Quinta, Cathedral City, Rancho Mirage, Palm Desert and Oasis. A repeat event struck the same areas on September 23rd and 24th, causing an additional \$4.4 million in damage. The third type is summer thunderstorms, such as those experienced in 1941 and 1948 (FEMA, 1996).

FEMA (1991) describes a potential for a major breakout of the Whitewater River during a 100-year intensity storm at the bend in the Whitewater River between Jefferson Street and Miles Avenue. This flooding potential impacts mostly the cities of Indio and Coachella. However, in the City of La Quinta, the Indian Springs Country Club area may be inundated (Figure 3-1). In this area the man-made storm channel deviates substantially from the traditional watercourse of the Whitewater River. FEMA (1991) estimated the levee capacity in this area and concluded that the levee could erode at this major bend. A breakout would result in a 50 percent loss of channel capacity. Improvements to the levees along the Coachella Valley Stormwater Channel, as well as along the La Quinta Evacuation Channel, have lessened the chance that a breakout could occur.

The other problem area identified by FEMA (1991) is that a 100-year flooding event emanating from Bear Creek would flow northward from the easterly bend in the Bear Creek channel and inundate the area of the La Quinta Country Club Mountain Course (Figure 3-1).

3.1.3 Flood Protection Measures

Whitewater River: The Whitewater River is the major drainage for the entire Upper Coachella Valley, which eventually flows into the Salton Sea about 40 miles to the southeast of La Quinta. The Whitewater drains areas as far away as the summit of San Geronio Pass, and the steep southern and eastern slopes of Mount San Geronio, with a total drainage area of approximately 850 square miles upstream of the City of La Quinta (FEMA, 1991). The Whitewater River is the principal drainage course through the City of La Quinta. It is typically dry, but when it carries water it flows southeasterly. At the eastern boundary of the City of La Quinta, the Whitewater River is contained by the Coachella Valley Stormwater Channel, which flows to the northeast and around the City of Indio.

The Whitewater River from Point Happy to the Salton Sea, including the portion that transects the City of La Quinta, is a man-made channel generally following the historical path of the Whitewater River. This man-made channel is known throughout the valley as the Coachella Valley Stormwater Channel. The channel is mostly unlined, with an average cross-section width of 250 feet, a depth of 30 feet, and levees generally 10 feet above the surrounding valley floor. The Coachella Valley Water District maintains the channel, including straightening and grading as necessary.

Bear Creek System: The Upper Bear Creek System (Figure 3-1) consists of the Upper Bear Creek Training Dike, the Upper Bear Creek Detention Basin, Bear Creek and Bear Creek Channel, and four side-drainage inlets. The Upper Bear Creek Training Dike diverts the 100-year stormwater runoff from a drainage 1.7 square miles in area. The runoff is conveyed to Bear Creek, and then to the Upper Bear Creek Detention Basin. The slopes of the embankments are protected with riprap to prevent erosion. The Upper Bear Creek Detention Basin has a storage capacity of 752 acre-feet for temporary detention of storm runoff and debris. The basin is approximately 700 feet wide and 1,350 feet long, with its bottom at an elevation of 320 feet. Flows from Bear Creek enter the basin via a 5:1 (horizontal:vertical) sloped inlet protected by riprap. Attenuated by storage in the temporary basin, outflows enter the Bear Creek Channel through a rectangular concrete spillway in the basin embankment. After a storm event, the water detained in the basin drains into the Bear Creek Channel until the basin is empty. The 2.5-mile long Bear Creek Channel is a soil-cement-lined, trapezoidal channel that is 40-feet wide, except for the last 400 feet, where it is 70 feet wide. The upper 2 miles have a relatively steep gradient of 2.8%, while the lower 0.5 miles have a gradient of 0.15%. Channel bank heights were designed so that the channel can carry the waters from a 100-year event. Four side-inlet channels along the western margin of the Bear Creek Channel drain smaller canyons and carry flood-flows into the

channel while storing debris during a major storm event. The Oleander Reservoir collects storm runoff from the Bear Creek system and the drainage areas north and west of the reservoir and discharge it to the Coachella Valley Storm Channel via the La Quinta Evacuation Channel. During a 100-year storm, the water level in the reservoir is projected to rise to an elevation of 44 feet.

La Quinta Evacuation Channel: The La Quinta Evacuation Channel is about 3.5-miles long (Figure 3-1), and consists of two distinct reaches. The lower 2.4 mile-reach is a 50-foot wide trapezoidal earthen channel, while the upper 1.1 mile reach is an irregularly shaped, grass-lined channel.

East La Quinta Channel: The east La Quinta Channel intercepts runoff from the drainage area in the foothills east of Avenida Bermudas and carries it with low level releases from the Calle Tecate Detention Basin, to the Avenue Bermudas Detention Basin (Figure 3-1). The East La Quinta Channel is trapezoidal with full riprap lining that follows the existing natural drainage channel. The Avenida Bermudas Detention Basin is designed to handle runoff and retain debris from the surrounding drainage areas. Runoff is discharged through a 60-inch reinforced concrete buried conduit into the La Quinta Evacuation Channel (Figure 3-1).

3.1.4 Coachella Valley Water District

The Coachella Valley Stormwater District merged with the Coachella Valley Water District in 1937. The principal stormwater project of the district through the mid-1970s was the realigning, widening and deepening of the Whitewater River Stormwater Channel and the Coachella Valley Stormwater Channel to serve as master drains for the entire area from north of Palm Springs to the Salton Sea. These improvements cost approximately \$10 million in 1960's dollars with most construction work paid from taxes raised within the district's stormwater unit assessment area. Repairs after major storm damage have been financed from federal and state emergency funds. The Whitewater River Stormwater Channel becomes the Coachella Valley Stormwater Channel east of Washington Street. West of Washington Street, the channel follows the general alignment of the natural riverbed, while below Washington Street, where the Whitewater River changed course with every flood, the alignment is totally designed by man. The channel below a wide intake area above Palm Springs has a right-of-way 500 feet wide, and the bottom of the channel is 260 feet wide. Dikes vary between 16 and 20 feet in height and the channel is 50 miles long. It has a capacity of 75,000 cubic feet per second or 148,725 acre-feet within a 24-hour period.

The Bureau of Reclamation constructed the district's Eastside Dike to protect the Coachella Canal. Two dikes, totaling 4.5 miles, were constructed on the west side of the valley to shield Lake Cahuilla and farm lands between Avenue 58 and Avenue 66. Funds were obtained under a loan approved by voters in the canal-irrigated area.

From the mid-1970s to early 1990s, most of the district's flood control efforts were directed toward providing regional protection from flash floods from the mountains for the Cove communities from La Quinta to Rancho Mirage. Approximately 207 miles of stormwater protection facilities have been developed within the district. Construction of protective facilities for the La Quinta area began in 1978 and were completed in 1986. Lower works for the project, including a reservoir to collect floodwaters and an evacuation channel to carry them to the Coachella Valley Stormwater Channel, have been completed. These were financed by stormwater taxes, private contributions from developers in the area, and a federal grant.

Upper works in La Quinta included construction of a dike and debris basin at the mouth of Bear Creek, construction of a soil-cement-lined channel which routes water to the reservoir, and construction of a channel and detention pond on the east side of the Bear Creek neighborhood (Figure 3-1). These projects were completed by the Coachella Valley Water District in 1986 at a cost of \$15 million with funding from the La Quinta Redevelopment Agency. Flood protection facilities for the east side of La Quinta were completed in 1987.

3.1.5 Lake Cahuilla

Lake Cahuilla, terminal reservoir of the Coachella Branch of the All-American Canal, was constructed in 1969 to serve as storage for a reserve supply of irrigation water needed chiefly in emergency periods, during hot, dry summer spells. Since it takes 24 hours for water from Imperial Dam to arrive in the Coachella Valley, the lake gives the district some latitude when weather conditions change unexpectedly.

Constructed at a cost of \$1.56 million, exclusive of rights-of-way and land acquisitions, the lake was financed by a rehabilitation and betterment loan from the U.S. Bureau of Reclamation approved by voters in the Colorado River service area. Lake Cahuilla is located between Avenue 56 and Avenue 58, west of Jefferson Street, against the foothills of the Santa Rosa Mountains on the west side of the Coachella Valley (Figure 3-1). The lake is three-quarters of a mile long and half that in width at its widest point. The lake is between 11 and 12 feet deep and contains approximately 1,500 acre-feet of water. At the time of its construction, it was the largest soil-cement lined reservoir in the world. The basin of the lake was excavated to provide soil for building dikes 25 feet high and 100 feet wide. The bottom of the

lake was sealed with six inches of compacted soil-cement. The Riverside County Parks Department has an agreement with the water district for development of the lake and surrounding grounds for general recreational use by the public on a fee basis.

The modern Lake Cahuilla is not to be confused with the Ancient Lake Cahuilla, a natural lake that covered a large portion of the Salton Trough more than approximately 400 years ago (see Chapter 2).

3.2 Dam Failure

A review of records maintained at the California Office of Emergency Services indicates that there are no existing dams with the potential to inundate the City of La Quinta or its sphere of influence. Local flooding associated with failure of the Lake Cahuilla and Coachella Canal levees has not been evaluated. These levee systems may be impacted by a severe earthquake that includes lateral spreading of the foundation soils. Should these systems fail catastrophically, development immediately downgradient would be impacted, however, no engineering analyses that includes potential inundation mapping are available.

The statutes governing dam safety are defined in Division 3 of the California State Water Code (California Department of Water Resources, 1986). It empowers the California Division of Safety of Dams to monitor the structural safety of dams that are greater than 25 feet in dam height or 50 acre-feet in storage capacity. As indicated above, Lake Cahuilla is between 11 and 12 feet deep and contains approximately 1,500 acre-feet of water. The levee system around the lake includes dikes 25 feet high and 100 feet wide. Since, Lake Cahuilla exceeds the storage capacity minimum that empowers the California Division of Dam Safety (Division) to monitor its structural safety, this lake should be under the jurisdiction of the Division, but appears not to be.

3.3 Local Water Tanks/Reservoirs

Seismically induced inundation refers to flooding as a result of water retention structures (such as reservoirs) failing during an earthquake. A seiche is a free or standing-wave oscillation of the water surface in an enclosed or semi-enclosed basin, such as a lake, bay or harbor that results in response to ground shaking during an earthquake. The period of the wave varies depending on the dimensions of the basin. These waves can continue, pendulum fashion, for a time after the earthquake shaking ceases. Flood control and reservoir facilities could pose an inundation hazard if they contain water at the time of the seismic event, or if they are not repaired soon after an earthquake and prior to the next wet season. Enclosed bodies of water in La Quinta with the potential of seicheing includes Lake Cahuilla, as well as smaller golf course lakes, and recharge basins southeast of Lake Cahuilla.

Seismically induced inundation can also occur if strong ground shaking causes structural damage to above-ground water tanks. If a tank is not adequately braced and baffled, sloshing water can lift a water tank off its foundation, splitting the shell, damaging the roof, and bulging the bottom of the tank (elephants foot) (EERI, 1992). Movement can also shear off the pipes leading to the tank, allowing water to be released through the broken pipes. This type of damage was reported to occur during the Landers, Big Bear and Northridge earthquakes. Houses downgradient from a damaged water tank in the Santa Clarita area were inundated as a result of the Northridge earthquake. As a result of recent earthquakes, new AWWA Standards for Design of Steel Water Tanks were adopted in 1994 (Lund, 1994). This new tank design includes flexible joints that can accommodate movement in any direction.

3.4 Bridge Scour

Nationwide, several catastrophic collapses of highway and railroad bridges have occurred due to scouring with a subsequent loss of foundation support. This has led to a nationwide inventory and evaluation of bridges (Richardson and others, 1993). Scour at highway bridges involves sediment-transport and erosion processes that cause streambed material to be removed from the bridge vicinity. The scour processes are generally classified into separate components, including pier scour, abutment scour, and contraction scour. Pier scour occurs when flow impinges against the upstream side of the pier, forcing the flow in a downward direction and causing scour of the streambed adjacent to the pier. Abutment scour happens when flow impinges against the abutment, causing the flow to change direction and mix with adjacent main-channel flow, resulting in scouring forces near the abutment toe. Contraction scour occurs when flood-plain flow is forced back through a narrower opening at the bridge, where an increase in velocity can produce scour. Total scour for a particular site is the combined effects from all three components. While different materials scour at different rates, the ultimate scour attained for different materials is similar and depends mainly on the duration of peak streamflow acting on the material (Lagasse and others, 1991). Scour can occur within the main channel, on the flood plain, or both.

The State of California participates in the bridge scour inventory and evaluation program, however, to date, we have not found any records to indicate that the bridges in the La Quinta area have been evaluated. California's seismic retrofit program of bridges includes underpinning of foundations. This is expected to help reduce the vulnerability of foundations to be undermined by scour. The crossings of the La Quinta Evacuation Channel by Eisenhower Drive and Washington Street are considered "all-weather flood channel crossings" based on the City's existing General Plan. Washington Street and Jefferson Boulevard are the City's main crossing of the Whitewater River. These crossings should be inspected during and after flooding for scour damage.

3.5 National Flood Insurance Program

Owners of all structures within the projected inundation area of the 100-year flood (Special Flood Hazards Area, SFHA) are required to purchase and maintain flood insurance as a condition of receiving a federally related mortgage or home equity loan on that structure. However, nationwide estimates indicate that 75% of households in SFHAs do not have a National Flood Insurance Policy (NFIP). In 1968, Congress created the National Flood Insurance Program (NFIP) in response to the rising cost of taxpayer-funded disaster relief for flood victims and the increasing amount of damage caused by floods.

The NFIP makes federally-backed flood insurance available in communities that agree to adopt and enforce floodplain management ordinances to reduce future flood damage. National Flood Insurance is available in the City of La Quinta. The NFIP is managed by the Federal Emergency Management Agency's Federal Insurance Administration and Mitigation Directorate. The Federal Insurance Administration manages the insurance component of the NFIP, and works closely with FEMA's Mitigation Directorate, which oversees the floodplain management aspect of the program.

The NFIP is self-supporting for the average historical loss year, which means that operating expenses and flood insurance claims are not paid for by the taxpayer, but through premiums collected for flood insurance policies. Structures located in SFHAs have a 26 percent chance of being flooded in the course of a 30-year mortgage. Conversely, the likelihood that a building will catch fire over the same 30-year period is about 4 percent. Consequently, a borrower seeking a mortgage on a structure in a SFHA is more likely to experience a flood at that structure than a fire over the life of a 30-year mortgage. Nevertheless, the NFIP's policy retention rate is 88.6%, which means more than 11 percent of policyholders are lost each year.

However, floods do not just occur in SFHAs where flood insurance coverage is required by law. Between 20 percent and 25 percent of the NFIP's claims come from structures located outside a designated SFHA.

3.6 Flood Protection Measures

Flood protection can involve a variety of changes to structures and property that can vary in complexity and cost. Basic improvements may be done by individuals, however, complicated or large-scale changes and those that affect the structure of the house or its electrical wiring and plumbing should be carried out only by a professional contractor licensed to work in the City.

One example of flood protection is adding a waterproof veneer to the exterior walls of a home. This is something that only a licensed contractor should do. In areas where flood waters are less than 2 feet deep, a house can be severely damaged if water reaches the interior. The damage to walls and floors can be expensive to repair, and the house may be uninhabitable while repairs are underway. To protect a house from shallow flooding, add a waterproof veneer to the exterior walls and seal all openings, including doors, to prevent the entry of water. As shown in Figure 3-4, the veneer can consist of a layer of brick backed by a waterproof membrane. Before the veneer is applied, the siding is removed and replaced with exterior-grade plywood sheathing. If necessary, the existing foundation footing is extended to support the brick. Also, because the wall will be exposed to flood water, changes are made to the interior walls as well so that they will resist moisture damage. In the area below flood level, standard batt insulation is replaced with washable closed-cell foam insulation, and any wood blocking added inside the wall cavity is made of exterior-grade lumber.

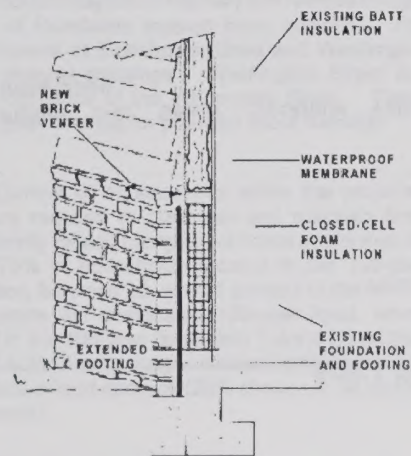


Figure 3-4: Adding Waterproof Veneer to Exterior Wall.

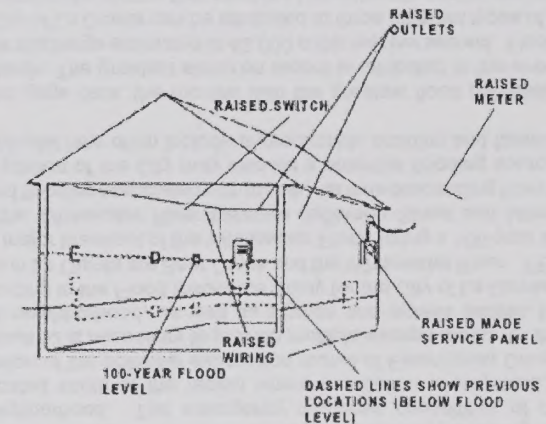


Figure 3-5: Raising Electrical Systems

Another flood mitigation measure consists of raising the electrical system components of a home in a SFHA (Figure 3-5). Electrical system components, including service panels (fuse and circuit breaker boxes), meters, switches, and outlets, are easily damaged by flood water. If they are inundated for even short periods, they will probably have to be replaced. Another serious problem is the potential for fires caused by short circuits in flooded systems. Raising electrical system components helps avoid those problems. Also, having an undamaged, operating electrical system after a flood will help assist in clean up and repairs.

All components of the electrical system, including the wiring, should be raised at least one foot above the 100-year flood level. In an existing house, this work usually will require the removal of some interior wall sheathing (drywall, for example). When repairing a flood-damaged house or building a new house, the electrical system should be elevated above the 100-year flood level as a matter of course.

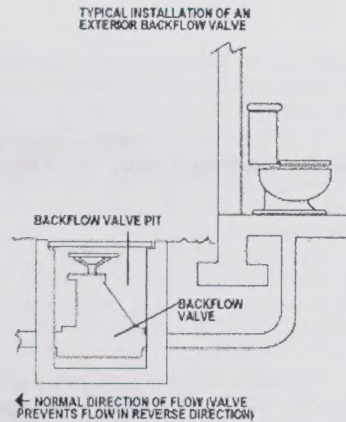


Figure 3-6: Sewer Backflow Valve Installation

In some flood-prone areas, flooding can cause sewage from sanitary sewer lines to back up into houses through drain pipes. These backups not only cause damage that is difficult to repair, but also create health hazards. A good way to protect a house from sewage backup is to install backflow valves, which are designed to block drain pipes temporarily and prevent flow into the house (Figure 3-6). Backflow valves are available in a variety of designs that range from the simple to the complex. Some designs must be operated by hand, so the effectiveness will depend on the amount of warning of impending flooding. Among the simpler valves are a flap or check valve, which open to allow flow out of the house but close when the flow reverses. These valves operate automatically but do not provide as strong a seal as a gate valve.

3.7 Summary

The City of La Quinta is vulnerable to flooding associated with the Whitewater River, and Bear Creek drainages, as well as smaller scale events on many of the alluvial fans that descend from the City's hillsides. A multi-hazard mitigation opportunity exists for the City of La Quinta and surrounding communities, in that control of flooding on the Whitewater River will substantially reduce the sand supply and subsequent wind-blown sand erosion and deposition hazard for the area described in Chapter 2. The City of La Quinta has an opportunity to further the development of innovative techniques of flood control for development on alluvial fans. Large scale developments in the Coachella Valley have utilized golf courses and greenbelts as part of a network of channels that collect flood flows on the upstream side of a project, carry it safely through the development, and disperse the flows on the downstream side.

Stream Flooding: Although most of the floodplains remain undeveloped, several important structures, such as the City Hall and Police Station, are located within an area that could be inundated during a 100-year flood event. Eisenhower Drive and Washington Street south of the La Quinta Evacuation Channel crossings, as well as Avenue 52, are projected to be inundated by the 100-year flood, thus, potentially trapping residents of the Bear Creek neighborhood. The emergency response capabilities of the City's Fire Department, located south of the region where inundation is projected, may also be affected. Mitigation of the potential evacuation routes of Eisenhower Drive, Washington Street, and Avenue 52 is necessary to provide multiple escape routes for the residents of the Bear Creek neighborhood, as well as ingress and egress access for emergency response. According to the Flood Insurance Study for the City of La Quinta, the potential flooding sources in La Quinta are Bear Creek and the Whitewater River. FEMA describes a potential for a major breakout of the Whitewater River during a 100-year intensity storm at the bend in the Whitewater River between Jefferson Street and Miles Avenue. In addition, localized flooding associated with the alluvial fans descending from steep hillsides in the southern portion of the City may also be a potential flooding source for the City. Flood flows on alluvial fans often include unpredictable braiding and fanning.

Based on stream gage data, the months with the greatest flood potential are January, February and March. The greatest storm on record is attributed to the event in March of 1938, with a peak discharge estimated at 42,000 cubic feet per second. Floods that impact the area of the City of La Quinta can be attributed to three different types of storm events. The first are general winter storms that combine high-intensity rainfall and rapid melting of the mountain snowpack. The second type are tropical storms out of the southern Pacific Ocean, such as tropical storm Kathleen in September 1976 that caused almost \$20 million in damages to the cities of La Quinta, Cathedral City, Rancho Mirage, Palm Desert and Oasis. The third type are summer thunderstorms, such as those experienced in 1941 and 1948.

Dam Inundation: A review of records maintained at the California Office of Emergency Services indicates that there are no existing dams with the potential to inundate the City of La Quinta. However, failure of the Coachella Canal or Lake Cahuilla levee systems could result in local flooding. These levees may be vulnerable to liquefaction or lateral spreading. Liquefaction and lateral spreading damaged Imperial Valley canals during earthquakes in 1979 and 1987. Lake Cahuilla appears to exceed the storage capacity minimum that empowers the California Division of Dam Safety to monitor its structural safety.

Local Water Tanks/Reservoirs: Above-ground steel tanks of several varieties were observed to have failed as a result of recent earthquakes. Priority should be given to evaluation of above-ground steel tanks based on their vulnerability to seismic hazards. In addition, priority should be given to tanks whose failure might inundate and damage structures down-gradient.

Tsunami Potential: Due to the inland location of the City, the susceptibility to tsunami inundation in the event of an earthquake is considered nil. However, local flooding as a result of seicheing of enclosed bodies of water, or failure of water tanks, may occur in an earthquake.

Bridge Scour: Nationwide, several catastrophic collapses of highway and railroad bridges due to scouring and a subsequent loss of foundation support have occurred. The crossings of the La Quinta Evacuation Channel at Eisenhower Drive and Washington Street are considered "all-weather flood channel crossings". Washington Street and Jefferson Boulevard are the City's main crossings of the Whitewater River. These crossings should be inspected during and after flooding for potential scour damage.

National Flood Insurance Program: Owners of all structures within the projected inundation area of the 100-year flood are required to purchase and maintain flood insurance as a condition of receiving a federally related mortgage or home equity loan on that structure. Estimates indicate that 75% of households located in the 100-year floodplain do not have insurance. In addition, between 20 and 25 percent of the NFIP's claims come from structures located outside the designated 100-year flood, where insurance is required. Structures located in the 100-year flood plain have a 26 percent chance of being flooded over the course of a 30-year mortgage. A homeowner in the 100-year flood plain is far more likely to experience flood damage (26% chance in 30 years), than experience a fire (4% chance in 30 years).

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The HAZUS 2006 software is designed to estimate potential losses from a seismic event. It uses a series of models to calculate the expected damage to buildings, infrastructure, and the environment. The software is based on the HAZUS 2006 methodology, which is a widely used standard for seismic loss estimation. The HAZUS 2006 methodology is based on the concept of seismic hazard, which is the probability of a seismic event of a certain magnitude occurring in a given area. The HAZUS 2006 methodology uses a series of models to calculate the expected damage to buildings, infrastructure, and the environment. The software is based on the HAZUS 2006 methodology, which is a widely used standard for seismic loss estimation.

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Appendix B
Census and Demographic Data
Used in HAZUS Loss Estimation

Demographic Inventory Data Printed on: 6/17/1999 12:25 AM
Census Tract Population Households Group Quarters Pop. age < 16 Pop. age 16-65 Pop. age > 65 White Population Black Population
06065045104 13,392 5,038 0 3,173 8,145 2,074 11,166 215

Census Tract	Native American Pop.	Asian Population	Hispanic Population	Pop. w/income < \$10K	Pop. w/income \$10-15K	Pop. w/income \$15-25K
06065045104	117	129	2,827	370	355	608

Census Tract	Pop. w/income \$25-35K	Pop. w/income > \$35K	Pop. Resid. at Day	Pop. Resid. at Night	Pop. Wrkng. Com.	Pop. wrkng. Ind.
06065045104	765	2,940	4,833	13,079	3,656	346

Census Tract	Pop. Commuting @ 5PM	Owner Occupied: Single Units	Owner Occupied: Multiple Units	Owner Occupied: Multiple Struct.
06065045104	611	3,437	77	24

Census Tract	Owner Occupied: Mobile Homes	Renter Occupied: Single Units	Renter Occupied: Multiple Units	Renter Occupied: Multiple Struct.
06065045104	260	954	257	61

Census Tract	Renter Occupied: Mobile Homes	Vacant: Single Units	Vacant: Multiple Units	Vacant: Multiple Struct.	Vacant: Mobile Homes
06065045104	26	2,688	361	48	172

Census Tract	Units Built Before '40	Units Built After '40	Avg Monthly Rent/Unit (\$)	Avg Value/Property (\$)
06065045104	138	8,159	737	0

ID	Name	Address	City	State
1	INDIAN WELLS SHERIFFS DEPT IND	44850 EL DORADO DR	INDIAN WELLS	CA
2	LA QUINTA SHERIFFS DEPT BUSINE	78495 CALLE TAMPICO	LA QUINTA	CA
3	RIVERSIDE SHERIFFS DEPT FOR BU		INDIAN WELLS	CA
4	RIVERSIDE SHERIFFS DEPT FOR BU		LA QUINTA	CA
5	RIVERSIDE SHERIFFS DEPT FOR BU		PALM DESERT	CA
6	INDIAN WELLS FIRE DEPT BUS CAL	44950 EL DORADO DR	INDIAN WELLS	CA
7	LA QUINTA FIRE DEPT BUSINESS C	AVE 52	LA QUINTA	CA

ID	ZipCode	Contact	Phone #	Class	Mapping	Bldg Type	Dsgn Lvl (L/M/H)
1	92210-7400		619-346-2489	EFPS dflt06H			
2	92253		619-863-8800	EFPS dflt06H			
3	92210		619-341-1600	EFPS dflt06H			
4	92253		619-863-8990	EFPS dflt06H			
5	92260		619-341-1600	EFPS dflt06H			
6	92210-7414		619-568-5252	EFFS dflt06H			
7	92253		619-564-4351	EFFS dflt06H			

ID	Name	Address	City	State
1	ACADEMY OF THE DESERT		PALM DESERT	CA
2	ADAMS-TRUMAN (PRIMARY) SCHOOL 78880 AVENIDA 50		LA QUINTA	CA
3	PALM DESERT COMMUNITY PRESBYTE 47321 HWY 74		PALM DESERT	CA

ID	ZipCode	District	Contact	Phone #	Class
1	92210			619-360-3132	EFS2
2	92253-2400			619-777-4230	EFS1
3	92260			619-568-4360	EFS1

Building Stock Exposure by Building Type

June 17, 1999

All values are in thousands of dollars

	Wood	Steel	Concrete	Precast	Reinforced Masonry	Unreinforced Masonry	Mobile	TOTAL
California								
Riverside	756,443	96,186	32,843	13,782	122,817	0	27,243	1,049,313
Total State	756,443	96,186	32,843	13,782	122,817	0	27,243	1,049,313
Total Study Region	756,443	96,186	32,843	13,782	122,817	0	27,243	1,049,313

Study Region : San Andreas M 8.0: City of La Quinta MCE
Scenario : N/A

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Building Stock Exposure By General Occupancy

June 17, 1999

All values are in thousands of dollars

	Residential	Commercial	Industrial	Agriculture	Religion	Government	Education	Total
California								
Riverside	932,241	100,911	8,406	486	3,050	2,099	2,119	1,049,313
Total State	932,241	100,911	8,406	486	3,050	2,099	2,119	1,049,313
Total Study Region	932,241	100,911	8,406	486	3,050	2,099	2,119	1,049,313

Study Region : San Andreas M 8.0: City of La Quinta MCE
Scenario : N/A

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Appendix C
HAZUS Loss Estimation Results
for a
M 7.2 San Jacinto Earthquake
(Maximum Probable Earthquake, MPE)

PESH - GBS - Spectral Vel. Printed on: 6/17/1999 1:01 PM

Tract	Distance (km)	Spectral Velocity @ 0.3 sec (in/sec)	Spectral Velocity @ 1.0 sec (in/sec)	PGV (in/sec)	PGA (g)
06065045104	24.011479152	10.1536	20.8242	12.6207	0.2562

PESH - GBS - Spectral Acc. Printed on: 6/18/1999 1:09 PM
Tract At 0.3 sec (g) At 1.0 sec (g)
06065045104 0.5506 0.3388

PESH - GBS - Spectral Disp. Printed on: 6/18/1999 1:09 PM
Tract At 0.3 sec (in.) At 1.0 sec (in.)
06065045104 0.4846 3.3130

Building Damage By General Occupancy

June 17, 1999

	Square Footage (Thousand sq.ft)	Damage State Probability (%)				
		None	Slight	Moderate	Extensive	Complete
California						
Riverside						
Agriculture	32	42.00	26.00	19.00	9.00	4.00
Commercial	1,117	35.00	24.00	24.00	12.00	5.00
Education	25	39.00	24.00	21.00	11.00	5.00
Government	27	33.00	23.00	25.00	14.00	6.00
Industrial	141	31.00	24.00	26.00	13.00	6.00
Religion	30	39.00	25.00	21.00	11.00	4.00
Residential	12,291	51.00	30.00	13.00	4.00	1.00
State Average	13,663	38.57	25.14	21.29	10.57	4.43
Study Region Average	13,663	38.57	25.14	21.29	10.57	4.43

Study Region : City of La Quinta Area
 Scenario : Maximum Probable Eq.-M 7.2 San Jacinto

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Building Damage by Building Type for Low Design Level

June 17, 1999

	Average Damage State (%)				
	None	Slight	Moderate	Extensive	Complete
California					
Riverside					
Concrete	5.00	8.00	27.00	36.00	25.00
Mobile Home	2.00	5.00	20.00	42.00	31.00
Precast Concrete	4.00	5.00	21.00	36.00	35.00
Reinforced Masonry Bearings Walls	9.00	7.00	26.00	37.00	20.00
Steel	2.00	4.00	20.00	39.00	35.00
Unreinforced Masonry Bearing Walls	0.00	0.00	0.00	0.00	0.00
Wood	8.00	19.00	46.00	20.00	8.00
Total State	4.29	6.86	22.86	30.00	22.00
Study Region Average	4.29	6.86	22.86	30.00	22.00

Study Region : City of La Quinta Area
 Scenario : Maximum Probable Eq.-M 7.2 San Jacinto

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Building Damage by Building Type for Moderate Design Level

June 17, 1999

	Average Damage State (%)				
	None	Slight	Moderate	Extensive	Complete
California					
Riverside					
Concrete	29.00	29.00	30.00	11.00	1.00
Mobile Home	8.00	20.00	41.00	27.00	4.00
Precast Concrete	30.00	23.00	32.00	12.00	2.00
Reinforced Masonry Bearings Walls	48.00	21.00	23.00	7.00	0.00
Steel	26.00	23.00	35.00	14.00	2.00
Unreinforced Masonry Bearing Walls	0.00	0.00	0.00	0.00	0.00
Wood	50.00	34.00	14.00	2.00	0.00
Total State	27.29	21.43	25.00	10.43	1.29
Study Region Average	27.29	21.43	25.00	10.43	1.29

Study Region : City of La Quinta Area
 Scenario : Maximum Probable Eq.-M 7.2 San Jacinto

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Building Damage by Building Type for High Design Level

June 17, 1999

	Average Damage State (%)				
	None	Slight	Moderate	Extensive	Complete
California					
Riverside					
Concrete	54.00	34.00	11.00	1.00	0.00
Mobile Home	8.00	20.00	41.00	27.00	4.00
Precast Concrete	48.00	29.00	20.00	2.00	0.00
Reinforced Masonry Bearings Walls	65.00	23.00	10.00	1.00	0.00
Steel	45.00	30.00	21.00	2.00	0.00
Unreinforced Masonry Bearing Walls	0.00	0.00	0.00	0.00	0.00
Wood	59.00	34.00	6.00	0.00	0.00
Total State	39.86	24.29	15.57	4.71	0.57
Study Region Average	39.86	24.29	15.57	4.71	0.57

Study Region : City of La Quinta Area
 Scenario : Maximum Probable Eq.-M 7.2 San Jacinto

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Emergency Response Facilities Functionality

June 17, 1999

	Count	Functionality(%) At Day 1
California		
Riverside		
Fire Station	2	40.03
Police Station	5	37.75
Total State	7	38.40
Total Study Region	7	38.40

Study Region : City of La Quinta Area
Scenario : Maximum Probable Eq.-M 7.2 San Jacinto

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School Functionality

June 17, 1999

	Count	Functionality (%)
California		
Riverside	3	34.84
Total State	3	34.84
Study Region	3	34.84

Study Region : City of La Quinta Area
Scenario : Maximum Probable Eq.-M 7.2 San Jacinto

Page : 1 of 1

Transportation Highway Bridge Damage

June 17, 1999

	# of Bridges	Average for Damage State				
		None	Slight	Moderate	Extensive	Complete
California						
Riverside	6	0.45	0.35	0.18	0.01	0.02
Total State	6	0.45	0.35	0.18	0.01	0.02
Study region Average	6	0.45	0.35	0.18	0.01	0.02

Study Region : City of La Quinta Area
Scenario : Maximum Probable Eq.-M 7.2 San Jacinto

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Transportation Highway Bridge Functionality

June 17, 1999

	# of bridges	Functionality (%)					
		At day 0	At day 1	At day 3	At day 7	At day 30	At day 90
California							
Riverside	6	53.40	75.95	89.75	96.38	97.34	98.04
Total State	6	53.40	75.95	89.75	96.38	97.34	98.04
Study Region	6	53.40	75.95	89.75	96.38	97.34	98.04

Study Region : City of La Quinta Area
Scenario : Maximum Probable Eq.-M 7.2 San Jacinto

Page :1 of 1

Debris Summary Report

June 17, 1999

All values are in thousands of tons.

County	Brick, Wood and Other	Reinf. Concrete and Steel	Total
Riverside, CA	19	46	65
Study Region Total	19	46	65

Study Region : City of La Quinta Area
Scenario : Maximum Probable Eq.-M 7.2 San Jacinto

Page : 1 of 1

Fire Following Analysis Summary Report

June 17, 1999

County	Burnt Area (%)	Number of Ignitions	Population Exposed	Value Exposed (thous. \$)
Riverside, CA	0.03	1	4	312
Study Region Total		1	4	312

Shelter Summary Report

June 17, 1999

	Displaced Households	Short Term Shelter Needs
California		
Riverside	71	43
Total State	71	43
Study Region Total	71	43

Study Region : City of La Quinta Area
 Scenario : Maximum Probable Eq.-M 7.2 San Jacinto

Page : 1 of 1

Casualties Summary Report

June 17, 1999

	Total Casualties - 2am				Total Casualties - 2pm				Total Casualties - 5pm			
	At Home	At Work	Commute	Total	At Home	At Work	Commute	Total	At Home	At Work	Commute	Total
California												
Riverside												
Severely 1:	33	0	0	33	10	6	0	15	12	1	0	13
Severely 2:	6	0	0	6	2	1	0	3	2	0	0	2
Severely 3:	0	0	0	0	0	0	0	0	0	0	0	0
Severely 4:	0	0	0	0	0	0	0	0	0	0	0	0
Total:	39	0	0	39	12	7	0	19	14	2	1	17
Total State												
Severely 1	33	0	0	33	10	6	0	15	12	1	0	13
Severely 2	6	0	0	6	2	1	0	3	2	0	0	2
Severely 3	0	0	0	0	0	0	0	0	0	0	0	0
Severely 4	0	0	0	0	0	0	0	0	0	0	0	0
Total :	39	0	0	39	12	7	0	19	14	2	1	17
Study Region Total												
Severely 1	33	0	0	33	10	6	0	15	12	1	0	13
Severely 2	6	0	0	6	2	1	0	3	2	0	0	2
Severely 3	0	0	0	0	0	0	0	0	0	0	0	0
Severely 4	0	0	0	0	0	0	0	0	0	0	0	0
Total :	39	0	0	39	12	7	0	19	14	2	1	17

Study Region : City of La Quinta Area
 Scenario : Maximum Probable Eq.-M 7.2 San Jacinto

Direct Economic Losses For Buildings

June 17, 1999

All values are in thousands of dollars

	Capital Stock Losses				Loss Ratio %	Income Losses				Total Loss
	Cost Structural Damage	Cost Non-struct. Damage	Cost Contents Damage	Inventory Loss		Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	
California										
Riverside	13,421	45,797	12,849	63	5.64	8,541	7,136	6,504	4,712	99,023
Total State	13,421	45,797	12,849	63	5.64	8,541	7,136	6,504	4,712	99,023
Study Region Total	13,421	45,797	12,849	63	5.64	8,541	7,136	6,504	4,712	99,023

Study Region : City of La Quinta Area
 Scenario : Maximum Probable Eq.-M 7.2 San Jacinto

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Indirect Economic Change

June 17, 1999

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6 to 15	Average
% Net Indirect Employment Change	0.00	0.00	0.00	0.00	0.00	0.00	0.00
% Net Indirect Income Change	-1.55	-2.24	-2.24	-2.24	-2.24	-2.24	-2.20
Net Indirect Employment Change	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Indirect Income Change in Mil.\$	-2.00	-2.89	-2.89	-2.89	-2.89	-2.89	-2.83

Study Region : City of La Quinta Area
 Scenario : Maximum Probable Eq.-M 7.2 San Jacinto

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Appendix D
HAZUS Loss Estimation Results
for a
M 8.0 San Andreas Earthquake
(Maximum Credible Earthquake, MCE)

Tract	Distance (km)	Spectral Velocity @ 0.3 sec (in/sec)	Spectral Velocity @ 1.0 sec (in/sec)	PGV (in/sec)	PGA (g)
06065045104	13.867665256	18.4829	40.7541	24.6994	0.4178

PESH - GBS - Spectral Acc. Printed on: 6/18/1999 1:08 PM
Tract At 0.3 sec (g) At 1.0 sec (g)
06065045104 1.0022 0.6630

PESH - GBS - Spectral Disp. Printed on: 6/18/1999 1:09 PM
Tract At 0.3 sec (in.) At 1.0 sec (in.)
06065045104 0.8821 6.4836

Building Damage by Building Type for Low Design Level

June 17, 1999

	Average Damage State (%)				
	None	Slight	Moderate	Extensive	Complete
California					
Riverside					
Concrete	0.00	1.00	5.00	16.00	78.00
Mobile Home	0.00	0.00	2.00	17.00	81.00
Precast Concrete	0.00	0.00	4.00	12.00	84.00
Reinforced Masonry Bearings Walls	1.00	1.00	7.00	18.00	73.00
Steel	0.00	0.00	1.00	14.00	85.00
Unreinforced Masonry Bearing Walls	0.00	0.00	0.00	0.00	0.00
Wood	0.00	2.00	16.00	35.00	46.00
Total State	0.14	0.57	5.00	16.00	63.86
Study Region Average	0.14	0.57	5.00	16.00	63.86

Study Region : San Andreas M 8.0: City of La Quinta MCE
 Scenario : Maximum Credible Eq.-M 8.0 San Andreas

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Building Damage By General Occupancy

June 17, 1999

	Square Footage (Thousand, sq.ft)	Damage State Probability (%)				
		None	Slight	Moderate	Extensive	Complete
California						
Riverside						
Agriculture	32	11.00	24.00	32.00	18.00	15.00
Commercial	1,117	8.00	16.00	30.00	24.00	21.00
Education	25	10.00	20.00	30.00	20.00	19.00
Government	27	8.00	16.00	30.00	24.00	23.00
Industrial	141	7.00	16.00	30.00	24.00	23.00
Religion	30	10.00	21.00	31.00	21.00	18.00
Residential	12,291	14.00	33.00	33.00	10.00	7.00
State Average						
	13,663	9.71	20.86	30.86	20.14	18.00
Study Region Average						
	13,663	9.71	20.86	30.86	20.14	18.00

Study Region : San Andreas M 8.0: City of La Quinta MCE
 Scenario : Maximum Credible Eq.-M 8.0 San Andreas

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Building Damage by Building Type for High Design Level

June 17, 1999

	Average Damage State (%)				
	None	Slight	Moderate	Extensive	Complete
California					
Riverside					
Concrete	17.00	39.00	35.00	9.00	1.00
Mobile Home	0.00	4.00	23.00	41.00	31.00
Precast Concrete	13.00	28.00	43.00	14.00	2.00
Reinforced Masonry Bearings Walls	31.00	32.00	30.00	6.00	1.00
Steel	10.00	23.00	45.00	19.00	2.00
Unreinforced Masonry Bearing Walls	0.00	0.00	0.00	0.00	0.00
Wood	20.00	49.00	27.00	2.00	0.00
Total State	13.00	25.00	29.00	13.00	5.29
Study Region Average	13.00	25.00	29.00	13.00	5.29

Study Region : San Andreas M 8.0: City of La Quinta MCE
 Scenario : Maximum Credible Eq.-M 8.0 San Andreas

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Building Damage by Building Type for Moderate Design Level

June 17, 1999

	Average Damage State (%)				
	None	Slight	Moderate	Extensive	Complete
California					
Riverside					
Concrete	5.00	15.00	36.00	33.00	11.00
Mobile Home	0.00	4.00	23.00	41.00	31.00
Precast Concrete	3.00	8.00	31.00	38.00	20.00
Reinforced Masonry Bearings Walls	7.00	12.00	35.00	35.00	12.00
Steel	5.00	10.00	35.00	36.00	15.00
Unreinforced Masonry Bearing Walls	0.00	0.00	0.00	0.00	0.00
Wood	12.00	34.00	40.00	11.00	3.00
Total State	4.57	11.86	28.57	27.71	13.14
Study Region Average	4.57	11.86	28.57	27.71	13.14

Study Region : San Andreas M 8.0: City of La Quinta MCE
 Scenario : Maximum Credible Eq.-M 8.0 San Andreas

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Emergency Response Facilities Functionality

June 17, 1999

	Count	Functionality(%) At Day 1
California		
Riverside		
Fire Station	2	6.96
Police Station	5	7.64
Total State	7	7.44
Total Study Region	7	7.44

School Functionality

June 17, 1999

	Count	Functionality (%)
California		
Riverside	3	6.86
Total State	3	6.86
Study Region	3	6.86

Transportation Highway Bridge Functionality

June 17, 1999

	# of bridges	Functionality (%)					
		At day 0	At day 1	At day 3	At day 7	At day 30	At day 90
California							
Riverside	6	20.37	39.11	56.88	72.56	75.86	83.19
Total State	6	20.37	39.11	56.88	72.56	75.86	83.19
Study Region	6	20.37	39.11	56.88	72.56	75.86	83.19

Study Region : San Andreas M 8.0: City of La Quinta MCE
 Scenario : Maximum Credible Eq.-M 8.0 San Andreas

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Transportation Highway Bridge Damage

June 17, 1999

	# of Bridges	Average for Damage State				
		None	Slight	Moderate	Extensive	Complete
California						
Riverside	6	0.09	0.24	0.41	0.13	0.14
Total State	6	0.09	0.24	0.41	0.13	0.14
Study region Average	6	0.09	0.24	0.41	0.13	0.14

Study Region : San Andreas M 8.0: City of La Quinta MCE
 Scenario : Maximum Credible Eq.-M 8.0 San Andreas

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Debris Summary Report

June 17, 1999

All values are in thousands of tons.

County	Brick, Wood and Other	Reinf. Concrete and Steel	Total
Riverside, CA	63	135	198
Study Region Total	63	135	198

Study Region : San Andreas M 8.0: City of La Quinta MCE
Scenario : Maximum Credible Eq.-M 8.0 San Andreas

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Fire Following Analysis Summary Report

June 17, 1999

County	Burnt Area (%)	Number of Ignitions	Population Exposed	Value Exposed (thous. \$)
Riverside, CA	0.05	2	7	521
Study Region Total		2	7	521

Study Region :
Scenario :

San Andreas M 8.0: City of La Quinta MCE
Maximum Credible Eq.-M 8.0 San Andreas

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Shelter Summary Report

June 17, 1999

	Displaced Households	Short Term Shelter Needs
California		
Riverside	314	190
Total State	314	190
Study Region Total	314	190

Study Region : San Andreas M 8.0: City of La Quinta MCE
 Scenario : Maximum Credible Eq.-M 8.0 San Andreas

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Casualties Summary Report

June 17, 1999

	Total Casualties - 2am				Total Casualties - 2pm				Total Casualties - 6pm			
	At Home	At Work	Commute	Total	At Home	At Work	Commute	Total	At Home	At Work	Commute	Total
California												
Riverside												
Severity 1:	120	0	0	120	36	20	1	56	42	5	2	50
Severity 2:	22	0	0	22	6	4	1	11	8	1	2	11
Severity 3:	2	0	0	2	1	1	2	3	1	0	4	5
Severity 4:	2	0	0	2	1	1	0	1	1	0	1	2
Total:	145	0	1	146	43	25	4	72	51	7	9	67
Total State												
Severity 1	120	0	0	120	36	20	1	56	42	5	2	50
Severity 2	22	0	0	22	6	4	1	11	8	1	2	11
Severity 3	2	0	0	2	1	1	2	3	1	0	4	5
Severity 4	2	0	0	2	1	1	0	1	1	0	1	2
Total :	145	0	1	146	43	25	4	72	51	7	9	67
Study Region Total												
Severity 1	120	0	0	120	36	20	1	56	42	5	2	50
Severity 2	22	0	0	22	6	4	1	11	8	1	2	11
Severity 3	2	0	0	2	1	1	2	3	1	0	4	5
Severity 4	2	0	0	2	1	1	0	1	1	0	1	2
Total :	145	0	1	146	43	25	4	72	51	7	9	67

Study Region : San Andreas M 8.0: City of La Quinta MCE
 Scenario : Maximum Credible Eq.-M 8.0 San Andreas

Indirect Economic Change

June 17, 1999

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6 to 15	Average
% Net Indirect Employment Change	0.00	0.00	0.00	0.00	0.00	0.00	0.00
% Net Indirect Income Change	-4.57	-6.62	-6.62	-6.62	-6.62	-6.62	-6.48
Net Indirect Employment Change	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Net Indirect Income Change in Mil.\$	-5.89	-8.54	-8.54	-8.54	-8.54	-8.54	-8.36

Study Region : San Andreas M 8.0: City of La Quinta MCE
 Scenario : Maximum Credible Eq.-M 8.0 San Andreas

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Direct Economic Losses For Buildings

June 17, 1999

All values are in thousands of dollars

	Capital Stock Losses				Loss Ratio %	Income Losses				Total Loss
	Cost Structural Damage	Cost Non-struct. Damage	Cost Contents Damage	Inventory Loss		Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	
California										
Riverside	39,440	135,236	30,895	134	16.65	25,931	20,263	17,093	13,818	282,810
Total State	39,440	135,236	30,895	134	16.65	25,931	20,263	17,093	13,818	282,810
Study Region Total	39,440	135,236	30,895	134	16.65	25,931	20,263	17,093	13,818	282,810

Study Region : San Andreas M 8.0: City of La Quinta MCE
 Scenario : Maximum Credible Eq.-M 8.0 San Andreas

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